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ABSTRACT

This document describes an evaluation of the competencies of faculty who deliver contracted workforce training at Fox Valley Technical College (FVTC). A self-assessment questionnaire was administered to FVTC's 150 full-time and adjunct faculty who conduct workforce training; in addition, 157 employers who were clients of the college in the provision of contracted workforce training completed an evaluation survey. By comparing the means of each respondent group with the ideal means established for each competency item by a formative committee, performance gaps were recognized, the largest of which was organizational culture assessment skill. The document also discusses: (1) the need for employer-contracted workforce training; (2) the extent to which community colleges must prepare to respond to training needs; (3) industry standards for instructors/trainers of incumbent workers in business and industry; (4) FVTC faculty self-assessment ratings of the contracted workforce training they deliver; (5) assessment of FVTC training programs by employer clients; (6) gaps between ideal competency levels, faculty self-assessment, and employer/client assessment; and (7) recommendations for the professional development of FVTC faculty to address any performance gaps and training needs identified in this evaluation. Appended are a listing of the formative committee, instructor/trainer competencies, the faculty self-assessment instrument, the employer/client evaluation instrument, criteria for questionnaire evaluation, and various letters and recommendations. (Contains 88 references.) (EMH)

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ED 426 735

EVALUATION OF FACULTY COMPETENCIES IN THE DELIVERY OF CONTRACTED WORKFORCE TRAINING WITH RECOMMENDATIONS FOR FACULTY DEVELOPMENT AT FOX VALLEY TECHNICAL COLLEGE

Susan A. May

JC 990064

A major applied research project presented to Programs for
Higher Education in partial fulfillment of the
requirements for the degree of
Doctor of Education

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by

Susan A. May

October, 1998

For Fox Valley Technical College (FVTC) to continue expanding its role in economic development through the provision of workforce training and technical assistance to employers and their employees, an evaluation project involving the competencies of faculty who deliver contracted workforce training was conducted. The purpose of this project was twofold: (a) to evaluate the competency levels of FVTC faculty who deliver contracted workforce training to incumbent workers in business and industry against the industry standards for trainers and (b) to generate recommendations for faculty development at FVTC to address any performance gaps and inservice training needs identified through this evaluation.

The study involved seven research questions. First, "How pervasive is the need for employer-contracted workforce training for incumbent workers?" Second, "To what extent do community and technical colleges need to prepare to respond to the training and re-training needs

of employers and the employed workforce?" Third, "What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?" Fourth, "How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?" Fifth, "How do the employer clients of FVTC's contracted workforce training programs rate the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?" Sixth, "Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?" Seventh, "What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?"

A survey instrument was administered as a self-assessment to FVTC's full-time and adjunct faculty who had conducted any contracted workforce training for business and industry clients during the 1997-98 academic year. A modification of this instrument was also administered to employers who contracted with FVTC for the training of six or more participants and completed between October 1997 and March 1998.

The study involved both the evaluation and development problem-solving methodologies encompassing ten procedural steps. The procedures included a comprehensive review of the literature, establishment of criteria (competencies), development of the assessment instruments, administration of the faculty self-assessment instrument, administration of the employer/client evaluation instrument, data collection and tabulation, data analysis, identification of performance gaps and recommendations, validation of the evaluation study and its recommendations, and development of the final recommendations.

The results of this study included clear evidence of the current and future demand for incumbent worker training by American companies. Inherent in the demand for educational services was the increasing level of expectations by employers for responsiveness, customer service, and high quality training. Results also showed that most community colleges conduct some level of workforce training, are well positioned to deliver this type of training but will need to attain new levels of flexibility, responsiveness, and quality to remain competitive in this arena. Community college faculty were identified as being central to the success of workforce training. The study identifies the competencies (knowledge and skills) most directly applicable to the role of instructor/trainer in the delivery of workforce training at FVTC, as well as the ideal mean ratings of each competency. The faculty self-assessment resulted in the identification of performance gaps in seven of the 23 competency areas; the employer evaluation identified four of 12 competencies. The competencies showing the greatest performance gaps were consistent across the respondent groups--"organizational culture assessment skill" and "instructional technology application skill." A one-way analysis of variance showed that there was a significant difference among the sample respondent group means. Using the performance gap data, 12 recommendations for faculty development were identified using the nominal group technique. These recommendations were further refined and detailed prior to final review and adoption by the formative and summative committees, resulting in a total of 10 recommendations.

The study concluded that core competencies of instructors/trainers and ideal levels of performance could be established and serve as evaluation criteria. Very few major performance gaps in instructor/trainer competencies were identified in this study. The most significant gaps identified in the results were consistently evident from all three respondent groups (full-time faculty, adjunct faculty, and employers). Finally, the formative committee's recommendations for faculty development addressed the performance gaps identified in the evaluation and were appropriate within the context of FVTC.

Recommendations from the study included using the evaluation data to make modifications and improvements in workforce training at FVTC and to fully implement the proposed plan for faculty development. It was further recommended that the results of the study be disseminated to several key internal groups and that key components of the study be shared with the professional community through conference presentations and through a variety of potential written venues. Finally, several recommendations were made for follow-up and further research related to workforce training and staff development in community colleges.

TABLE OF CONTENTS

Page

LIST OF TABLES 14

Chapter

1. INTRODUCTION 15
    - Nature of the Problem 15
    - Purpose of the Project 16
    - Background and Significance of the Problem 17
    - Research Questions 18
    - Definition of Terms 19
2. REVIEW OF THE LITERATURE 21
    - Introduction 21
    - Workforce Training 21
        - America's Economic Challenge 22
        - The Changing Nature of the Workplace 23
        - Employer Demand for Workforce Training 24
    - Community Colleges' Expanded Mission in Economic Development 28
        - Customer Expectations in Workforce Training 29
        - Implications of Customer Expectations for Community Colleges . . . 32
        - Community Colleges' Responsiveness to Workforce Training Needs . . 34
        - Competing in the Workforce Training Arena 41
    - Instructors/Trainers in Business and Industry 45
        - Benefits of Using an Instructor/Trainer Competency Model 46

TABLE OF CONTENTS (Cont.)

Page

Competencies of Instructors/Trainers 47

Faculty Development in Community Colleges 55

Trends In Community College Faculty Development 59

Needs Assessment 63

Barriers to Faculty Participation in Faculty Development Programs . . . 64

Strategies for Faculty Development 65

Evaluation Research 69

Roles and Purposes of Evaluation 69

Surveys as an Approach to Evaluation 70

Implementation Strategies 71

Summary 73

3. METHODOLOGY AND PROCEDURES 77

Methodology 77

Procedures 78

Instrumentation 78

Research Questions and Related Procedures 82

Assumptions 89

Limitations 90

4. RESULTS 91

Research Questions 92

TABLE OF CONTENTS (Cont.)

Page

Research Question One: Need for Employer-Contracted Workforce Training 92

Research Question Two: Community College Responsiveness in Workforce Training 93

Research Question Three: Industry Standards for Instructors/Trainers . . 94

Research Question Four: Instructor/Trainer Self-Assessment of Competencies 95

Research Question Five: Employer/Client Evaluation of Instructor/Trainer Competencies 97

Research Question Six: Gap Analysis of Ideal Versus Actual Mean Ratings of Competencies 102

Research Question Seven: Recommendations for Faculty Development . . 108

Summary 111

5. DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS 113

Discussion 113

Conclusions 117

Implications 119

Recommendations 120

Recommendations for Implementation 120

TABLE OF CONTENTS (Cont.)

Page

Recommendations for Dissemination 121

Recommendations for Further Research 121

BIBLIOGRAPHY 124

APPENDIXES 131

A. Formative Committee 132

B. Instructor/Trainer Competencies 133

C. Faculty Self-Assessment Instrument 135

D. Employer/Client Evaluation Instrument 137

E. Criteria for Questionnaire Evaluation 139

F. List of Questionnaire Validators 141

G. Cover Letter for Faculty Self-Assessment Instrument 142

H. Cover Letter for Employer/Client Evaluation Instrument 143

I. Instrumentation Summative Committee 144

J. Feedback Document on Questionnaire 145

K. Feedback Form for Questionnaire Pilots 147

L. Summative Committee 148

M. Project Summative Committee Feedback Form 149

N. Follow-Up Faculty Self-Assessment Cover Letter 150

O. Summary of Responses to Open-Ended Survey Items 151

P. Follow-Up Employer/Client Evaluation Cover Letter 154

Q. Formative Committee Recommendations for Faculty Development 155

TABLE OF CONTENTS (Cont.)

Page

R. Detailed Recommendations for Faculty Development 158

S. Summative Committee Feedback on Recommendations for Faculty Development 164

T. Final Recommendations for Faculty Development 166

BIOGRAPHICAL SKETCH OF STUDENT 170

LIST OF TABLES

Table Page

1. Survey Number, Distribution, and Response Rates 97
2. Faculty Self-Assessment Data 98
3. Employer Evaluation Data 101
4. Gap Analysis of Faculty Self-Assessment Responses 103
5. Gap Analysis of Employer Responses 105
6. Perceived Levels of Competency on Twelve Common Items by Full-Time Faculty, Adjunct Faculty, and Employers 106
7. Gap Analysis Summary of Three Respondent Groups 109

Chapter 1

INTRODUCTION

Fox Valley Technical College (FVTC) is one of Wisconsin's 16 technical colleges within the Wisconsin Technical College System and serves a five county area with a district population base of almost 400,000. The college's main campus is located in Appleton, Wisconsin with a branch campus in Oshkosh and regional center facilities in Chilton, Clintonville, Neenah, Waupaca, and Wautoma.

The mission of FVTC is "to help individuals reach their potential by providing cost-effective education and training for employment. We seek to build and maintain an effective and diverse workforce that supports the economic growth and stability of our communities" (Fox Valley Technical College, 1995, p. 20). In fulfillment of this mission, the college offers over 65 associate of applied science degree and technical diploma programs, as well as a number of short-term certificates, related instruction for apprenticeships, and basic skills programming. Additionally, a wide variety of continuing education programming is delivered, including extensive contract training and technical assistance for business, industry, government, and labor. Through the occupational areas of business, health, service, manufacturing, transportation, and agriculture, as well as general education, FVTC serves approximately 47,000 individuals and 4,700 FTE (full time equivalency) in student enrollment each year. Fox Valley Technical College is accredited as an institution of higher education by the North Central Association of Colleges and Schools (NCA).

Nature of the Problem

Fox Valley Technical College embraced, as part of its statutory mission, a major initiative in the provision of workforce training as a contracted educational service to employers. The college has integrated this function within its academic structure as opposed to establishing a shadow college and separate cadre of faculty to deliver this training. In 1996-97, FVTC delivered 21% of the total volume of workforce training conducted by the state-wide 16 college Wisconsin Technical College System. Recognized as a leader of community colleges in the area of workforce training at both the state and national levels, FVTC intends to continue expanding its role in economic development through the provision of workforce training and technical assistance to employers and their employees.

It was quite widely recognized that college faculty are frequently assigned to deliver customized training contracts for employers with little or no preparation for this type of assignment. Yet, FVTC employed its regular faculty extensively in the delivery of workforce training contracts. The problem was that there was a lack of evidence that this group of faculty meets the industry standards (accepted and validated competencies for trainers in business and industry) in the delivery of workforce training. There had been no formal evaluation of faculty competencies in the delivery of training to business and industry, a relatively new customer market for the college. In the absence of this type of evaluation, very little had been done in the area of professional development of faculty to equip them adequately in this particular area of educational delivery. If this was going to be a major area of institutional emphasis in ensuing years, systematic inservice training as part of the college's faculty development program would be necessary to help ensure effective teaching and learning in the delivery of contracted workforce training.

Purpose of the Project

The purpose of this project was twofold: (a) to evaluate the competency levels of FVTC faculty who deliver contracted workforce training to incumbent workers in business and industry against the industry standards for trainers, and (b) to generate recommendations for faculty development at FVTC to address any performance gaps and inservice training needs identified through this evaluation.

Background and Significance of the Problem

This project had significant implications for the future success of workforce training provided by FVTC and the faculty who were assigned to this function. The need for this type of project was evidenced in the literature by the lack of evaluation and professional development models targeted to college faculty who conduct training in the private sector. This project addressed a problem that was readily recognized and of high interest within the FVTC organization by the college president, the vice president of administrative services who has oversight responsibility for staff development, the training and development coordinator, the dean of community and economic development, and by the project researcher who serves in the capacity of vice president of instructional services.

The college administration had recently participated in a national survey of employers who had been clients of workplace training and several survey items had a relationship to this evaluation. The study conducted by May (1997b) compared the results of a national workforce training survey of employers conducted in 1996 by the American Association of Community Colleges with FVTC's local employer responses to this survey. On the item involving "responsiveness to employer needs," this study showed significantly higher ratings by community colleges nationwide (43.8% "good"; 47.6% "excellent") than the ratings from FVTC's business clients (60% "good"; 26.3% "excellent"). "With regard to the quality of training provided, 92.2% of the FVTC clients rated quality as being either good or excellent; 96% of the clients, nationally, rated quality as being good or excellent" (p. 39). The results of this study, although generally very positive, revealed some room for improvement by the college in terms of responsiveness to employer needs and the quality of instruction.

The primary outcome of this project was the availability of evaluation results to address the extent to which FVTC's faculty involved in contracted workforce training currently possess the competencies identified as industry standards for trainers. This evaluation data could be considered baseline data for subsequent evaluation studies in the future to determine if continuous improvement were occurring. Another potential outcome was the identification of components of a faculty development inservice program to address any gaps that might exist between current competency levels and the expected competency levels of business and industry. The final outcome for this research project was a series of recommendations for faculty development at FVTC which addressed the needs of individuals who deliver contracted workforce training based upon the evaluation and needs assessment data generated earlier.

Research Questions

The following seven research questions were addressed in this study:

1. How pervasive is the need for employer-contracted workforce training for incumbent workers?

2. To what extent do community and technical colleges need to prepare to respond to the training and re-training needs of employers and the employed workforce?

3. What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?

4. How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?

5. How do the employer clients of FVTC's contracted workforce training programs rate

the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?

6. Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?

7. What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?

Definition of Terms

For this research project, the following terms were defined:

Adjunct faculty. Adjunct faculty serve as instructors/trainers for a college on a very limited part-time basis, generally assigned to a very specific teaching assignment consistent with the individual's area of expertise. The faculty member is typically not employed under any form of contract or long-term commitment with the organization.

Contract training. Contract training typically refers to the provision of training services to an employer as a client within an agreed upon set of expectations and the client making payment to the providing entity for such services.

Competency. A competency refers to a "cluster of related knowledge, skills, and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development" (Parry, 1996, p. 50).

Customized training. Customized training generally refers to curriculum and training delivery that is client-driven and custom-designed to meet specific workplace application needs.

Education. Education focuses primarily on acquiring and understanding general or specific areas of information. The content of education consists of knowledge, principles, and concepts (Towle, 1996, p. 1).

Faculty development. Faculty development refers to "explicit institutional efforts to improve the effectiveness of college teaching and learning" (Angelo, 1994, p. 118).

Incumbent worker. An incumbent worker is an individual who is already fully employed in the workforce, as opposed to individuals preparing to enter the workforce or the unemployed.

Personal mastery. Personal mastery is a learning discipline involving "learning to expand our personal capacity to create the results we most desire, and creating an organizational environment which encourages all its members to develop themselves toward the goals and purposes they choose" (Senge, Roberts, Ross, Smith, & Kleiner, 1994, p. 6).

Training. The primary focus of training is on the behavioral aspects of acquiring and doing some specific action with information that is provided. The content of training typically consists of skills, abilities, and techniques (Towle, 1996, p. 1).

Workforce development. Workforce development refers to the process of responding to the education and training needs of employers by adapting traditional schedules, content, or delivery formats. Topics are selected by employers to teach specific skills to incumbent workers. This is also sometimes referred to as customized or contract education and/or training (Grubb, Badway, Bell, Bragg, & Russman, 1997, p. 4).

Workforce training. Workforce training consists of learning activities that are designed to increase the skills and competencies of current employees in business, industry, labor, or government. This concept is also at times referred to as workforce development.

Chapter 2

REVIEW OF THE LITERATURE

Introduction

The initial section of this review focuses on the changing nature of the workplace and the resulting demand for workforce training, as well as the extent to which community colleges are positioned to respond to workforce training needs. To identify the criteria for this evaluation study, the literature review examines the role of the instructor/trainer in conducting workforce training and the competencies needed by faculty in this mode of delivery. Further, a component on the professional development of faculty considers trends in college faculty development, needs assessment, barriers to faculty participation in programs, and implementation strategies. Finally, the review concludes with a section on evaluation research to address the core methodology used in this major applied research project.

Workforce Training

Workforce training, also commonly referred to as customized training, involves those activities designed to improve the skills and competencies of current employees of business, industry, labor, and government (Jacobs, 1992, pp. 5-6). This training is typically delivered on a contract basis with the employer who, as the client, defines the training objectives, the schedule, location, duration of the training, the delivery mechanism, and often, the qualifications of the instructor (pp. 6-7). Workforce training is also customer-driven, involves payment by the client to the training entity, and is usually linked to some economic development strategy of the employer (pp. 7-9).

Similarly, Bergman (1996) uses the phrase "employee training" and defines it as supporting "adaptive, productive workplaces that capitalize on investments in both technology and workforce skills to boost productivity. Employee training is firm-focused and is a key element of a firm's overall performance improvement plan" (p. 1). Bergman further suggests that training assists a firm in effectively utilizing technology resources, decentralizing decision-making, improving work processes through improved worker knowledge and skills, and improving customer satisfaction and profitability.

The following sections explore specific components of workforce training. These components include the competitive economic challenges facing American companies, the changing nature of the workplace, and the level of employer demand for workforce training.

America's Economic Challenge

Rapid and profound change is transforming the American economy and posing unprecedented challenges to American businesses. These changes include deregulation, competition, shortened product life cycles, new technologies, and new competitive standards that are restructuring industries, how the workplace is organized, and how companies manage and train their workforces (Jones, 1996, p. 21; Zeiss, 1997b, p. xiii). Jones goes on to state:

> These changes have also fundamentally changed the U.S. economy. Staying in the game requires companies to have unprecedented flexibility, constantly refocusing as new technologies and emerging players reshape markets virtually overnight. As markets morph, they demand new skills and cast off old ways of doing business. (p. 21)

Carnevale (1998) also suggests that job requirements are changing as the economy changes. He contends that the transition the workplace is currently undergoing "raises the ante on skill requirements for anyone seeking employment, and a substantial number of Americans do not have the skills they need" (p. 5). These skills are equally important to keeping a job in an age of decreased employment security as they are in getting a job. "As a result, employees need better basic, occupational and problem-solving skills, as well as continuous skill upgrading" (p. 6).

Jacobs (1992) points out that virtually every national study of the U.S. economy eventually focuses on the issue of worker education and training. Employees need to be able to use new manufacturing technologies and learn new tasks and roles quickly in responding to rapid changes in world markets. Jacobs suggests that one major strategy to address this economic challenge is "vigorous customized training promoted by the state and articulated through community colleges" (p. 62).

A report by Price Waterhouse (1994) states that "it is broadly recognized that training and education contribute significantly to the economy's strength and, more generally, to society's well-being" (p. E1). The National Alliance of Business (1997b) comments that "increasingly, the competitive advantage of states and communities--like that of businesses--hinges on the skills of their workforces" (p. 3). Education and training are becoming high-stakes issues that represent the foundation for economic development. A paper issued by the American Association of Community Colleges (1993) contends that "a consensus has emerged that the key to ensuring the nation's economic position is to train a workforce that can compete successfully with any in the world" (p. 3). Robinson and Robinson (1996) concur that to remain competitive in today's world, organizations must have a highly skilled, adaptive, and motivated workforce, but also contend that "there must be a return for the investment made in training" (p. ix).

The Changing Nature of the Workplace

It has been widely documented that the American workplace is changing rapidly in response to global competition, the utilization of new technologies, and organizational restructuring to increase worker participation. These changes are creating an increasing demand for highly skilled workers who can adapt to and function in high performance jobs (Hernandez-Gantes, Sorenson, & Nieri, 1995, p. 4; Jones, 1996, p. 21).

The National University Continuing Education Association (1995) points out that existing workers will need to be retrained and new entrants to the workforce must be prepared properly for work which will require more education and greater flexibility. A skilled workforce becomes a key ingredient to sustaining the nation's long-term political, social, and economic interests (p. ii). The 1994 study conducted by Price Waterhouse on U.S. Business Views on Workforce Training echoes these changing workplace dynamics:

> Businesses are employing more technologically advanced equipment that requires current employees to improve their existing skills and learn new ones. Changes in corporate management structures have reassigned responsibility from upper management to workers and supervisors, increasing the need for management and team-based work skills at these levels. Also, companies want to become more flexible to better meet the competitive challenges of the future, and having employees with diverse skills and the ability to adapt to changing work environments is necessary for obtaining this flexibility. (p. 18)

In his 1992 work, Seymour considers the employee perspective on training and proposes that education and training is not a punishment to be inflicted when things go wrong. It should involve providing people with skills they need to prevent things from going wrong in the first place. Education is not an expense, but rather an investment in the human capital of an organization. It is employees who identify customer needs, implement continuous improvement, and make things happen. Therefore, one management function involves helping employees to learn their jobs and perform them better (p. 16).

Employer Demand for Workforce Training

The Price Waterhouse (1994) study contends that awareness of the importance of workforce training in the U.S. has increased in recent years, due to increased international competition and tough economic times. Raising the skill and productivity levels of the labor force through training strengthens the ability of businesses to compete, as well as enhances workers' earning potential and employment/re-employment opportunities (p. E1). This study concludes that the vast majority of employers, regardless of industry or size, recognize the importance of training to their companies' futures. More than 70% of the employers in this study characterize workforce training as very important (p. 7). "Overall, two out of three companies respond that they expect an increase in their training needs, which validates the prediction that training will become increasingly important in the near future" (p. 18). Caudron (1996) summarizes this workplace demand by suggesting that ". . . employee learning requirements are at an all-time high. The amount of information is doubling every five to seven years. New technology . . . in the workplace requires constant skills upgrading" (p. 32).

The Conference Board, a nonprofit organization made up of businesses with a focus on research and based in New York, found that, "despite major investments in technology, downsizing, restructuring, and re-engineering to cut costs and improve competitive advantage, 98% of companies responding [to the study] report a need to gain more productivity and higher performance from their workforce" (Csoka, 1994, p. 7). A recent study conducted by the University of Pennsylvania indicates that companies benefit from investing in workforce education. They found that companies that increased the educational level of their workforce by one year experienced an 8.6% increase in productivity. "It has become evident over the past few years that the quality of a company's workforce is its most important competitive advantage" (Jones, 1996, p. 22).

Davis and Botkin (1994) point out that employees have become a major new learning segment because of the need to keep pace with technology, a demand that is felt acutely in the workplace. They propose that for companies to remain competitive and workers to be employable, they must continue to learn (p. 16). Davis and Botkin further suggest that the enormous volume of employee education often goes unnoticed because it is submerged in the workforce, takes place on a part-time basis, and is not very glamorous. They put this employee market for learning in a very descriptive context:

> The number of corporate employees receiving formal, budgeted training in 1992 grew by nearly four million people. On average, each of these people had 31.5 classroom contact hours annually, an increase of 126 million additional hours of employee learning in just that one year. If this kind of growth occurred in higher education, it would be the equivalent of almost a quarter million additional full-time college students. To house this many new learners on a college campus, thirteen new universities the size of Harvard would have to be built to handle a single year's growth in corporate education. That is more growth in just one year than enrollment growth in all the new conventional college campuses built in the United States in the thirty years from 1960 to 1990. (p. 88).

The National Alliance of Business (1997a) most recently reports that American companies are spending between $55 billion and $60 billion for company-provided education and training. These training expenditures have grown by 18% during the last twelve years. More employees are the beneficiaries of this increase in employer-sponsored education and training with more than 41% of American workers (approximately 46 million people) reporting that they received skill improvement training from their company in 1991; that is up 36% since 1983 (p. 3). Robinson and Robinson (1996) clarify that this financial investment involves direct costs only; if the cost of having employees attend training off the job is added to the equation, the figure rises to more than $300 billion (p. ix).

Shaw (1997) indicates that the past decade also has shown a tremendous shift in how companies are providing workforce training. In the early 1980s, almost 90% of corporate training was done in-house, while today fully 50% is provided by outside contractors. Of the millions of dollars spent by American corporations on upgrading employee skills in 1995, only a fraction of this work was done by community colleges (p. 3). Carnevale and Desrochers (1997) recommend that community colleges need to expand their role in re-training adults. By the year 2005, they predict that employers will need to increase formal company training by nearly 25%, or an additional $1.5 billion over the current level of spending. They anticipate that employers will need to spend a total of $78 billion just to maintain the training levels provided in 1991 (p. viii).

O'Banion (1994) further supports the increasing demand for workforce training by business and industry as follows:

> Community colleges are increasingly called upon by business leaders and political leaders to play a major role in preparing the workforce of the future. Every national commission that has studied the U.S. economy in recent years has recommended the community colleges as a key institution in providing workforce training for the nation. (p. 14)

The literature on workforce training presents substantial evidence that American companies are operating in a highly competitive economic environment and their employees' ability to develop new skills and abilities through education and training seem to be central to the competitive strength of organizations (American Association of Community Colleges, 1993, p. 3; Jacobs, 1992, p. 62; Jones, 1996, p. 21; National Alliance of Business, 1997b, p. 3; Price Waterhouse, 1994, p. E1; Robinson & Robinson, 1996, p. ix; Zeiss, 1997b, p. xiii). Workers need to be able to adapt to rapid changes in the workplace, broaden and diversify their skills and abilities, and function in high performance jobs (Hernandez-Gantes et al., 1995, p. 4; Jones, 1996, p. 21; Price Waterhouse, 1994, p. 18). Clearly, the competitive economic environment and employers' increasing expectations of workers are creating an enormous demand by corporate America for workforce training (Caudron, 1996, p. 32; Price Waterhouse, 1994, p. E1). American companies are spending billions of dollars each year as an investment in education and training of their employees (National Alliance of Business, 1997a, p. 3; Robinson & Robinson, 1996, p. ix) and any recent commission on the issue of the national economy has recommended the community colleges as key institutions in providing this training (Jacobs, 1992, p. 62; O'Banion, 1994, p. 14).

Community Colleges' Expanded Mission in Economic Development

Community colleges have long had the responsibility for preparing a sizable number of the nation's workforce for entry into the workplace. "Further, these colleges are looked to by the nation's employers as a primary source for retooling and keeping the nation's workforce up-to-date. Indeed, the health of the nation's economy can be largely attributed to the leadership of the nation's community colleges in economic development" (Boone, 1997, p. 5). O'Banion (1994) reports that a number of changes and social forces have caused community colleges to expand and realign their mission. "In recent years, community colleges have been broadening their definition of community in serving business and industry and deepening their definition of community by addressing some of the more difficult social problems" (p. 14). The policy paper developed jointly by the League for Innovation in the Community College and the American Association of Community Colleges (1994) provides the following challenge to community college leaders:

> . . . trustees, CEOs, senior administrators, and faculty--should explicitly acknowledge that workforce training for employees of local business, industry, labor, and government is one of the core missions of their institutions, a logical extension of career preparation, continuing education, and community service missions. They must acknowledge that providing training for individuals already in the workforce extends, but does not supplant, preparing new and returning entrants for the workforce. (p. 54)

Kantor (1994b) suggests that the boundaries are beginning to blur between community colleges' more traditional mission of educating learners who are yet to be employed and their expanding mission of educating the fully employed learners in the workplace. She contends that enlightened colleges "have begun to see the instructional role as a continuum with traditional students on one end and business clients who contract for the training of their employees on the other end" (p. 5). Kantor sees this educational continuum as a significant opportunity to address a wider variety of subjects, settings, and audiences, but also expresses that teaching across this continuum will require training for faculty.

Karre (1997) also addresses the expanding mission of community colleges as we approach the twenty-first century and face radical shifts in our economy and demographics. Karre specifically discusses the added complexity of this mission expansion and states:

> The role our community and technical colleges play in preparing all citizens for full participation in the economy and society of the twenty-first century is critical. At an accelerating rate, we are moving into a rapidly changing, information-based, high-technology, and interdependent society. Along with the traditional role of providing college students with skills and information, increasingly educators in community and technical colleges are called upon to engage in intra- and entrepreneurships. We must provide educational experiences within a variety of contexts which produce lifelong learners. Our challenge is complex. As leaders and educators, we must be able to adapt our knowledge and skills to a much broader audience, to varying contexts, with job applications. To be successful we must know our audience. (p. 28)

The following sections consider key aspects of community colleges' expanded mission in economic development. Customer expectations in workforce training and their implications for community colleges are central to fulfilling this mission. Community colleges' responsiveness to workforce training needs and their ability to compete in the workforce training arena are also examined.

Customer Expectations in Workforce Training

"Customer focus is the bedrock of success in a competitive world. While some in the community college world may not like the terminology of 'customer,' colleges do, in fact, have constituencies they serve: students, employers, transfer institutions, and society-at-large" (Shaw, 1997, p. 2). Shaw ascertains that these constituencies are demanding the very things that are being demanded of other service operations: flexibility, customization, value, ease of access, speed, low cost, and no hassle (p. 2). The work of Caudron (1996) supports the reality of customer demands contending that, "unfortunately, while learning requirements have increased, the time available for training is disappearing as product life cycles get shorter and shorter" (p. 32).

Hough (1994) addresses the opportunities that community colleges have to respond to key needs and expectations of the business sector. He suggests that colleges will require a willingness to rethink and reengineer traditional approaches to course curriculum development, training and education delivery methods, and skill certification. He also contends that neither workers nor their employers can dedicate huge chunks of the work day in classrooms on campus. Instead, they look for skill training and education providers to deliver training tailored to their specific needs, objectives, timetables, and locations. Employers will also expect and demand services that clearly improve, in quantifiable terms, productivity. Finally, Hough points out that educational providers who are accountable for quality and effectiveness will secure the strongest position in the market. Employers will seek accountability from their training partners in outcome performance (pp. 6-7).

The Oregon Business Council (1996) suggests that great opportunity exists for higher education in that state. To grasp these opportunities, first and foremost, higher education must become "thoroughly customer-driven--in both philosophy and organizational behavior" (p. 3). This is further described in the Oregon Business Council's report as staying close to customers, listening and responding to what they want, anticipating and proposing services, continuously evaluating and improving service delivery, and building and maintaining long-term relationships.

Doucette (1993) points out that community colleges have traditionally been closer in their working relationship with business than other institutions of higher education and have considerable experience in providing programs and services to adult students (p. 21).

The Oregon Business Council (1996) recommends changes in mind set, operation, and curriculum content in higher education, and possibly changes in institutional structure. Business leaders who directed this study point out that they understand what is being asked of higher education as follows:

> The business community itself has gone through wrenching changes in recent years as competition has increased and as markets have contracted, shifted, or exploded. It understands the ordeal of reassessment, adjustment, and restructuring. It does not underestimate what it is asking of higher education. Business wants higher education to succeed in serving its markets, and, in fact, depends on that success. Business is ready and willing to help. (p. 4)

Eisen (1997) articulates the needs she has identified from manufacturing firms across the country and provides suggestions for community colleges to strengthen partnerships with industry to help build the best workforce in the world. Eisen conveys the following recommendations to community colleges:

1. Quality--new technologies, new processes, and continuous improvement must be a hallmark of the coursework
2. Promises kept--clients need to get what was promised out of courses
3. Customization--there must be careful examination of what a particular company needs
4. Strategizing--a workforce plan that complements the company's strategic business plan; many need help in developing strategic plans
5. On-site training--training on the clock (on company time) and on-site is best for employees and creates the best learning environment

6. Credit courses--credit for employees that can eventually lead to a degree

7. Flexibility--approach clients as a resource for a range of services

8. Innovation--new programs designed for a constantly changing economy; this should be the rule, not the exception

9. Coordination--serve as a nexus for an employer in working with various local programs/services

10. Promotion--serve as an influence on public opinion regarding the value of manufacturing jobs (pp. 20-22).

The National Alliance for Business (1997c) articulates the following business view on education and training:

> Education is important to individual and company success. Little attention has been focused on the impact and implications of these [post-secondary education market] changes for the American education and training industry. Indeed, thinking of education and training as an industry is itself a new concept. Much has been written about how these changes will increase company and individual training investments and expand the aggregate demand for training and education. Another part of the story, which has not been widely discussed, is how these changes are transforming the structure of the education and training industry itself. (p. 1)

Implications of Customer Expectations for Community Colleges

Carreon (1996) recognizes factors which will impact community college occupational education and identifies trends that are already occurring, but indicates that positioning for an uncertain future remains a challenge. Carreon contends that what will be important to success in an unpredictable future is a college's ability to pay attention to the customers and communities it serves. She further indicates that efforts to improve customer service and the institution's responsiveness to changing needs will be very well spent, regardless of the future. The concepts of responsiveness and customer service need to be an integral part of the college mission (p. 4).

Community colleges serve the following four distinct student groups as identified by Kantor (1997): (a) the emerging workforce learners--18-22 year olds preparing for their first career; (b) the existing workforce learners--full- or part-time employees who need education to remain competitive on the job; (c) the transitional workforce learners--individuals transitioning into the workforce because they have been downsized, rightsized, or disenfranchised in some way; and (d) the entrepreneurial workforce learners--people who are starting or already own their own businesses (pp. 27-28). Business, on the other hand, defines the learning market somewhat differently. According to Davis and Botkin (1994), the marketplace for learning is being redefined dramatically to one of lifelong learning, not K-12, but K-80. The major segments in the learning marketplace identified by Davis and Botkin are customers, employees, and students; in that order (p. 16). Kantor (1997) contends that these new market perspectives have profound implications for community colleges and without serious customer-delivery change, community colleges will no longer have the corner on the market for learning (p. 29).

Kantor (1997) also argues that to improve instructional practices further, colleges will have to not only incorporate the information-age values of service, productivity, customization, networking, speed, flexibility, and a global perspective, but also businesslike practices (p. 30). Davis and Botkin (1994) suggest that educational institutions will need to implement practices they refer to as the "six Rs: risks, results, rewards, relationships, research, and rivalry (competition)" (pp. 132-156). Gordon (1995) further supports the notion that "colleges have to act more like businesses, with performance measured in terms of cost, quality, and quantity . . . [and] . . . must also learn to rely less and less on public, tax-based funding and operate as if survival is at stake" (p. 2). An organization's primary reason for existence is to produce quality outputs for customers. When customers no longer seek an organization's outputs, it must either change or die (Swanson, 1994, pp. 15-16). Seymour (1992) provides additional support for the notion of colleges as service/business organizations:

> Within the last decade a different lexicon has evolved on college campuses--'productivity,' 'assessment,' and 'cost containment' are some of the more stark terms. We can now add 'service quality' to that list. Whether we like it or not, we are in a service industry and our customers define quality in 'service quality' terms; that is, meeting or exceeding their expectations. Not delivering on service quality expectations--the expectation/reality gaps of the 1990s--is a certain recipe for mediocrity at best, severe fiscal and morale problems at worst. (p. 133)

Caudron (1996) further challenges workforce training providers to gain efficiencies and consider the fact that companies do not have either the time or money to continually train their entire workforces. Therefore it becomes imperative that trainers begin to understand and take advantage of the new learning technologies (p. 32).

Community colleges will need to shoulder a larger burden by strengthening their ability to work directly with employers in helping to invent and refine new strategies for demand-driven workforce development (Bosworth, 1997, p. 12). A key to this challenge is the ability to position appropriate workforce training faculty. Doucette (1993) indicates that one of the greatest obstacles to delivering customized contract training for fully employed learners was the lack of experienced trainers (p. 14).

Community Colleges' Responsiveness to Workforce Training Needs

"That community colleges are out in front in working with employers is hardly a new story. Collectively, the community colleges have become the chief institution in this country for reskilling millions of adults already in the workplace" (Bosworth, 1997, p. 12). Virtually all community colleges provide workforce training designed to meet the specific needs of business, industry, labor, and government in their respective service areas. Most of this training is currently provided in job-specific technical areas for small and medium-sized companies

(American Association of Community Colleges, 1993, p. 4; Doucette, 1993, p. iii). Marshall-Beckman (1993) states that "it has been clear for some time that the mission of community colleges across the country has been expanded to include providing workforce training, which has surfaced with increasing urgency on the national agenda" (p. v). Stamps (1995) confirms this level of involvement, indicating that five years ago, perhaps half of the nation's community colleges offered some contract training to local businesses. Today, the American Association of Community Colleges estimates that 90% of its member colleges are, to some extent, in the business of training workers for specific companies, rather than just teaching generic subjects or trades (p. 37). "Even more importantly, the leading-edge colleges have moved still further into work-centered training and employment services to employers" (Bosworth, 1997, p. 12). Kantor (1994) describes the extent of community colleges' efforts in workforce training through the following statement of historical context:

> At no other time in its history, except during the establishment of the county agent system in the 1880s, has higher education in general, and community colleges in particular, made such a concerted effort to accommodate business and industry so directly by bringing customized education to the doorsteps of offices and factories. (p. 1)

Jacobs (1995) suggests that community colleges have come a long way in the last 10 years in working with business and industry, but that it is vital that they continue to adapt to the ever changing needs of companies. Only by emphasizing flexibility and responsiveness can the community college continue to advance its role as a learning institution--and continue to contribute to the development of people and their employers (p. 2). Eisen (1997) concurs that "there have been extraordinary strides in the last decade and a half. Community colleges and technical institutes have become central to innovative practices in educating and training the workforce, both current and future" (p. 20). However, Eisen also indicates that for the manufacturing community, it is not enough. They are being squeezed to have the best, most productive workforce and they cannot do it alone. Kopischke (1997) further echoes this point by stating that ". . . what has been done in the past will not suffice in a future learning environment driven by responsiveness, flexibility, customer focus, and institutional readiness" (p. 1).

Many companies across the nation have attempted to solve their training needs by creating large in-house training units. Others have hired private trainers, but most have discovered the utility of contracting with America's community and technical colleges. The trend in corporate America during the past few years has been to outsource much of their training to these prolific colleges for the following reasons, among others: (a) 1,100 community colleges provide high accessibility to all Americans, (b) community colleges offer diverse and flexible training services, and (c) employers are having positive workforce training experiences with community colleges (Zeiss, 1997b, p. xiii).

Doucette (1993) concludes that "community colleges are emerging as one of the major, logical providers of the workforce training required to revitalize and maintain the competitiveness of the nation's business and industry" (p. 21). Community colleges, according to Doucette:

1. Have a long history of providing vocational, technical, and career training that reflects the needs of their local economies, often providing some of the most sophisticated training available in new and emerging technologies

2. Have a close working relationship with business and industry, many of whose representatives serve on the colleges' advisory committees and boards of trustees

3. Already provide a wide variety of training programs to small and medium-sized businesses, where the need for worker training is the greatest

4. Have a considerable track record in providing educational programs and services to adult learners, who make up the bulk of the workforce

5. Have invested in alternative delivery approaches, positioning them to support the independent learning needs of adult students with multiple life demands

6. Have also invested heavily in support services for students, including the support of nontraditional adult education

7. Are located within commuting distance of over 90% of the total population of the nation, providing excellent accessibility (pp. 21-22).

Jacobs (1995) concurs that community colleges are well positioned to broker learning among small and medium-size companies because of their location and proximity to this client base, and because most have mission statements that mandate the support of local economic development. Additionally, community colleges have what is probably the single largest resource of teachers who understand adult learning, and small and medium-size companies tend to be comfortable with community colleges, with many of their owners having attended these institutions (p. 2). Johnson's (1994b) research shows that the production and marketing of contract training in high-performing colleges: (a) is well supported by the president, (b) is structurally separated from traditional instructional units, (c) employs staff with relatively unique skills that are appropriate for serving business, and (d) utilizes operating procedures that are separate relative to traditional college operating procedures (p. 1).

O'Banion (1994) describes community college faculty as the most creative, innovative, and flexible teachers in education:

> What works for a class of high school students of the same age or a class of university students of similar socioeconomic backgrounds and SAT scores, often does not work in a class of community college students with no common denominator except membership in

> the human race. Given this diversity, it is no wonder the community college is called the 'teaching college,' and community college teachers are among the most creative innovators in all of higher education. (p. 14)

McCabe (1994) supports this description in that, "in community colleges, it takes great competence to be a successful teacher. The goal of teaching is not simply presenting information, but facilitating learning and often helping very needy individuals to grow" (p. 48).

Adult learners are entering community colleges in even greater numbers and are often sponsored by their employers. Both of these customers (adult students and employers) tend to be demanding consumers. Faculty and administrators in community colleges are becoming more concerned about responsiveness to student consumerism, economic pressures, and concerns about educational quality, thus the interest in Total Quality Management (TQM) and Continuous Quality Improvement (CQI) initiatives (Angelo, 1994, p. 121).

Bosworth's (1997) work considers trends in the choice of who actually does workforce training. He indicates that colleges rely far more on part-time or adjunct faculty, often people who have semi-retired. They are expanding their use of consultants with no relationship to the college faculty. Community colleges sometimes hire instructors from the firm where they are doing the training or from another firm. In some respects, colleges are becoming organizers or brokers of training rather than only the traditional training provider (p. 12). Johnson (1994b) goes so far as to state ". . . contract training should not be staffed and operated by personnel whose philosophies, skills, and perspectives are aligned with typical instructional departments" (p. 11).

In contrast, Kantor (1994b) argues that "participation in contract training by more permanent instructors integrates it into the mainstream where it can be a catalyst in influencing curriculum" (p. 6). Kantor further suggests that more faculty will be able to broaden the continuum along which they teach if supported by proper policies, administrative structure, and training systems that help facilitate more diverse teaching assignments (p. 10).

There are many similarities between customized training of fully employed learners and teaching the yet-to-be-employed learners that community college faculty are most accustomed to teaching. These similarities are as follows: (a) students in both settings are learners, and learning theories that maximize adult learning experiences apply to both groups; (b) principles of instructional design apply to both settings; (c) spatial considerations are needed for both; and (d) managing the interaction with students both inside and outside the classroom applies to both (Kantor, 1994b, p. 10).

Involvement in workforce training requires faculty members to "get out on the street" and learn new ways of serving their communities. New settings and new types of students will require faculty to experiment with teaching and learning. There will be a premium on a faculty member's ability to be flexible and responsive. As faculty participate in these new experiences, they will be renewed and will bring back new knowledge and experience to the traditional enclaves of the college. All can benefit as teaching and learning is transformed in this process (O'Banion, 1994, pp. 15-16).

One of the critical challenges that trainers face is the need to find ways to correct performance problems within a business. To do this they will need to use a wider array of interventions than they have in the past, including the use of technology. They can no longer limit themselves to the use of training as the prime vehicle for improving performance in an organization (Caudron, 1996, p. 35).

Karre (1997) proposes that educational experiences tailored to the audience's culture are most likely to evoke participants' attention, maintain their interest, and result in significant learning outcomes. This audience culture includes, but is not limited to, participants' interest in the educational experience, their level of understanding of the topic, their common knowledge and experience, and the roles that they play in the organization (pp. 28-29).

To prepare for educational experiences in workforce training, Karre (1997) recommends that instructors/trainers determine clear objectives for participant learning. Objectives need to be set in consultation with the contracting agency (employer), key personnel, and based on the instructor/trainer's expertise in teaching and learning. Assessing participant expectations is also critical. These expectations need to be incorporated into the objectives and the teaching and learning experiences need to be adapted to participant needs (p. 29).

Kantor's (1994b) work contains a number of factors that faculty who work with the fully employed learners in workforce training must consider:

1. Student considerations--motivation (are participants there by choice or is attendance mandated?); fully employed workers usually know each other very well.

2. Client considerations--two clients are involved (the employer and the employees).

3. Subject matter considerations--based on what the audience needs to know; relevance is key; application of theory is key; adaptation to the industry is key; there should be agreement between the college and the employer regarding the expected outcomes; material must be customized; instruction and delivery must be adapted to the company culture.

4. Time and place considerations--the training must adapt to the workforce schedule; company schedules may require material to be concentrated, compressed, videotaped, individualized, etc.; a variety of instructional modes and technologies may be required (pp. 7-9).

Approximately 50% of customized training conducted by community colleges is conducted on-site (Doucette, 1993, p. 7) requiring instructors/trainers to be extremely flexible and able to make creative adaptations to the training setting. Additionally, Kantor (1994b) points out that "sometimes development and delivery [of workforce training] require a rapid response. Instructors need to be flexible, knowledgeable, and capable of designing courses in a short period of time" (p. 8).

Competing in the Workforce Training Arena

As noted by Bardwick (1995), "although past achievements get you into today's game, only today's achievements will get you into tomorrow's game" (p. 56). Marshall-Beckman (1993) confirms that many employers have had a positive experience in using community colleges to provide training which has resulted in a growing interest in turning to colleges as a primary source of education and training for business and industry, and points out that:

> Costs have been reasonable; experience in teaching adults has helped employees to learn effectively; and willingness to design high-quality, need-specific training programs on relatively short lead times has made community colleges increasingly the providers of choice. (p. v)

Stamps (1995) projects a less positive view of community colleges' ability to compete in the workforce training arena. He states that:

> . . . the gap between the viable programs and the wannabes is not just one of money or critical mass. In many cases, it's a performance gap. While community colleges portray themselves as lean and entrepreneurial and service-oriented, the experiences of companies that have done business with them--or tried to--suggests that some schools don't entirely measure up. (p. 39)

Phyllis Eisen, senior policy director for the National Manufacturers' Association, is noted by Stamps (1995) as an individual who works with many community colleges and the companies who use them and believes that most colleges still have some catching up to do. Eisen conveys that "we consider maybe 300 [community colleges] as really viable, as really doing something in the workforce development game" (p. 39). Stamps further points out that "some community colleges run first-rate contract training programs but remain largely unknown to their potential customers" (p. 42).

Gordon (1995) expresses the need for community colleges to serve as learning consultants by establishing partnerships with companies that desire training. In some cases the companies' own employees might be better qualified to conduct the training, but the college could provide the technical assistance in curriculum development, progress evaluation, or other course development services (p. 2). Stamps proposes that one key indicator of a successful workforce training program centers around whether the college is willing to bring the instruction to the client, rather than insisting that the workers come to its campus. This can mean the difference between training that is cost-effective for an employer and training that is not. This willingness to take the instruction to the client presents a fundamental shift away from an academic mentality to a customer service mentality (1995, p. 41).

Many of the workforce training requests of community colleges involve training that is customized, short-term, cutting edge, and specialized. Colleges have had to change their concepts of instruction to accommodate this rapidly growing market. Working to deliver workforce training should be viewed as a "golden opportunity to expose faculty and administrators to state-of-the-market training requirements and cutting edge technology" (Kantor, 1996, p. 3).

There are other considerations in the ability of community colleges to compete successfully in the workforce training arena. Gordon (1995) asserts that:

> Colleges must build trust, respect, and confidence with the private and government sectors, starting by assigning their best staff to the job of workforce development. Colleges that put their cast-offs into workforce training are forfeiting the business. Those that use their best people to work with industry will be winners. (p. 2)

Zeiss (1997a) concludes that:

> Although community colleges pride themselves in being dynamic and adaptive to change, there is evidence that they will have to learn to adapt to changes in a more rapid and pervasive manner. The key factor for successful workforce development programs is that they are customer responsive. (p. 26)

Some basic components of a comprehensive workforce training program are identified in a recent report of the American Association of Community Colleges' Commission on Community and Workforce Development. These components include: (a) flexibility--provided in convenient time frames to meet business and industry needs; (b) responsiveness--the ability to respond quickly to the needs of customers; (c) cost effectiveness--affordable workforce training programs; (d) accountability--programs developed to meet competency or outcome standards; and (e) quality--guarantee of program results. Providers would also do well to focus on outcome measures and collect data that demonstrate a return on investment by clients. Many colleges have long been providing effective job training and retraining services, but have done a poor job of broadcasting their successful performances (Zeiss, 1997a, pp. 26-27).

Kopischke's (1997) study describes the exemplary two-year higher education institution of the future as being:

> . . . an organization completely focused on the needs of its customers. It will be a nimble organization, able to respond immediately to the ever-changing learning needs of the incumbent workers in its marketplace. It will be an organization that has learned how to continuously improve the systems and processes of learning, operation, and organization. It will be one that has embraced the ideologies of innovation, entrepreneurship, and enterprise. If these characteristics do not define and drive the institution, its very existence will be in jeopardy. (pp. 3-4)

Boone (1997) contends that private job training organizations are beginning to compete with community colleges in the training and retraining of the workforce. Boone indicates that there is a critical need for community colleges to:

> . . . develop and deliver vocational and technical training programs that are both relevant to the needs of the nation's workforce and of the highest quality. The establishment of strong partnership arrangements with the business and industry sector is viewed by many as an effective means for community colleges to stay in touch with the nation's workplaces. (pp. 10-11)

The workforce training arena holds challenging new customer expectations and service opportunities for community colleges, expectations not unlike those of any other business service providers (Eisen, 1997, pp. 20-22; Hough, 1994, pp. 6-7; Oregon Business Council, 1996, pp. 3-4; Shaw, 1997, p. 2). Implications for community colleges include positioning for responsiveness to changing customer needs (Carreon, 1996, p. 4), redefining the learning marketplace (Davis & Botkin, 1994, p. 16; Kantor, 1997, pp. 27-29), and implementing businesslike practices (Davis & Botkin, 1994, pp. 132-156; Gordon, 1995, p. 2; Kantor, 1997, p. 30; Seymour, 1992, p. 133). Most community colleges conduct some level of workforce training, are well positioned to be effective in this educational arena, and have come a long way in working with business. However, the literature suggests that new levels of flexibility and responsiveness will need to be attained for these institutions to remain competitive in this marketplace (Bosworth, 1997, p. 12; Jacobs, 1995, p. 2; Kopischke, 1997, pp. 3-4; Stamps, 1995, p. 37). Community college faculty are key to success in workforce training, whether regular faculty, adjunct faculty, or independent consultants (Kantor, 1994b, p. 10; O'Banion, 1994, pp. 15-16). These faculty must consider a number of unique factors in working with fully employed learners (Kantor, 1994b, pp. 7-9). Finally, to successfully compete, community colleges must assign their best faculty to the workforce training function (Gordon, 1995, p. 2), learn to adapt to more rapid, pervasive change (Zeiss, 1997a, p. 26), and deliver high quality, relevant training programs (Boone, 1997, pp. 10-11).

Instructors/Trainers in Business and Industry

"The critical link of any community college workforce training program is the professional staff who develop quality training in partnership with government, business, and labor" (Pierce, 1994, p. v). Bergman (1996) points out that serving as an instructor/trainer in business and industry is no small task. A training provider must have the skills to develop and deliver a successful employee training program--one that meets the needs of the client firm and builds the productive capacity of its employees (p. 1). "Given the teaching challenges inherent in the nature of workforce development, the quality of instruction should be a focus of real concern" (Grubb et al., 1997, p. 53).

The recent study conducted by Grubb et al. (1997) proposes the need for further research to ascertain the kinds of policies that would improve the quality of instruction without compromising the flexibility needed in workforce training. This proposed research could address areas such as instructor selection, training in teaching methods, curriculum development, and instructional centers (p. 54).

McLagan (1996) refers to the role of instructor/facilitator as an increasingly difficult one involving the presentation of information, leading structured learning experiences, and facilitating group discussions and group processes (sometimes in computer and other virtual environments). She proposes that:

> Because technology and self-management are taking over easier learning problems, what remain are complex, transformational, interpersonal, and social problems . . . the reality is that current transformations require courageous and sensitive facilitation bordering on therapy, both in planned and unplanned programs. (p. 65)

Robinson and Robinson (1996) contend that, for too long, the training profession has focused on the activity of training--designing courses, delivering programs, or identifying needs.

They indicate that this focus will no longer suffice in today's business environment. There must be a shift from a focus on what people need to learn (training) to what they must be able to do (performance) (p. 7).

The following sections explore the role of instructor/trainer in business and industry in more detail. The competency model for the role of instructor/trainer will be examined, as well as the benefits of using this model. Further, specific competencies of instructors/trainers are identified in this review including the emerging competency area of employing instructional technology. Finally, the characteristics of exemplary trainers are examined.

Benefits of Using an Instructor/Trainer Competency Model

Parry (1996) indicates that organizations throughout the world spend significant time conducting competency studies to identify the clusters of knowledge, attitudes, and skills needed to perform various jobs. These competencies often become the basis for human resource decisions such as hiring, training, and promotion. To support these important decisions, it is critically important that the competencies identified are valid (p. 48). Parry specifically defines a competency as:

> . . . a cluster of related knowledge, skills, and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development. (p. 50)

Robinson and Robinson (1996) point out that, when using a competency model, performance results critical to job and employer goals are identified and competencies are listed to accomplish each result (p. 141). They promote the use of competency language and describe the following benefits of doing so: (a) competencies form a common language across positions within an organization, (b) competencies are the best approach when the purpose is to form models for developing a performance management system, (c) organizations can identify core competencies required of all positions, (d) competencies are easily translated into training curricula, and (e) competency language is the best option when a job family or cluster is being assessed (pp. 110-111).

Competencies of Instructors/Trainers

Leach (1996) notes that a number of research studies were conducted in the 1980s by organizations such as the American Society for Training and Development (ASTD) and the International Board of Standards for Training, Performance, and Instruction to identify competencies required of trainers to perform their roles successfully. The competencies identified in these studies were very similar to those needed by public school teachers, especially instructors who work with adults. Leach contends, however, that:

> The knowledge, skills, and roles required for success as a trainer working in business and industry are less well documented [than the competencies of teachers of adults in general]. However, there is growing consensus of the knowledge and competencies required of trainers. (p. 8)

Leach discusses a profile of characteristics that he developed which training managers associate with excellent training in business and industry. The profile generally describes these trainers as individuals who "can set and accomplish goals and work well with others in established parameters" (1996, p. 8). In Leach's earlier work, he indicates that there is more than a collection of knowledge and skills which define an excellent trainer and that, ". . . all of the competencies required for success as a trainer are learned and many of the desirable interpersonal characteristics can be acquired or at least cultivated and refined" (1991, p. 8).

Bergman (1996) contends that trainers ". . . should be able to apply the principles of adult learning to instructional design and delivery . . ." (p. 13) and provides examples of this application, to include facilitating rather than lecturing, providing feedback, addressing multiple learning styles, using problem-centered instruction, and the integration of concepts with prior knowledge. Israel (1994) suggests that instructors who deliver to business, industry, and governmental entities essentially must become "knowledge choreographers" (p. 95) who orchestrate the learning process, making decisions on scope, pattern, and frequency of content. This choreography is further complicated in that "the components of customized training--the learner, the learning process, and the subjects to be learned--are constantly changing" (p. 95). All of these elements must converge to deliver high quality, state-of-the-art, and just-in-time training.

Western Kentucky University's Center for Training and Development focuses on supporting and promoting regional economic development through workforce training. The center's 92 trainers were carefully selected for their expertise and ability to work with adult learners. These individuals, who are critical to the success of this center's ability to respond to the needs of business and industry, must possess the following knowledge, skills, and attitudes: (a) know their subject matter; (b) understand the audience; (c) be well prepared; (d) have training experience in industry; (e) be comfortable working with adults; (f) display enthusiasm and excitement; (g) prepare training facilities for delivery; (h) use proper presentation skills; (i) present concepts, ideas, and facts; (j) react to logistics of industrial training; (k) use a variety of instructional aids; and (l) have abilities to handle delicate situations (Mussnug & Lyons, 1994, pp. 21-23).

One of the most extensive studies conducted involving competencies of training and development roles was the study commissioned by ASTD in 1987 called the "Competencies and Standards Study." This study was conducted with extensive involvement of human resource development professionals and was designed to build and expand on the results of ASTD's earlier "Models for Excellence" study in 1983. One of the outcomes of the latter study included the development of competencies (knowledge, skills, and abilities) that individuals must possess to produce outputs according to quality requirements (McLagan & Suhadolnik, 1989, pp. 1-2). McLagan and Suhadolnik describe the role of instructor/facilitator as ". . . presenting information, directing structured learning experiences, and managing group discussions and group process" (p. 39). The following competencies were identified by this study to be central to the role of instructor/facilitator in the training and development environment:

> Adult Learning Understanding: Knowing how adults acquire and use knowledge, skills, and attitudes; understanding individual differences in learning
>
> Coaching Skill: Helping individuals recognize and understand personal needs, values, problems, alternatives, and goals
>
> Feedback Skill: Communicating information, opinions, observations, and conclusions such that they are understood and can be acted upon
>
> Group Process Skill: Influencing groups so that tasks, relationships, and individual needs are addressed
>
> Intellectual Versatility: Recognizing, exploring, and using a broad range of ideas and practices; thinking logically and creatively without undue influence from personal biases
>
> Objectives Preparation Skill: Preparing clear statements that describe desired outputs
>
> Performance Observation Skill: Tracking and describing behaviors and their effects
>
> Presentation Skill: Verbally presenting information such that the intended purpose is achieved
>
> Questioning Skill: Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods
>
> Observing Skill: Objectively recognizing what is happening in or across situations
>
> Relationship Building Skill: Establishing relationships and networks across a broad range of people and groups

Self-Knowledge: Knowing one's personal values, needs, interests, style, and competencies and their effects on others

Subject Matter Understanding: Knowing the content of a given function or discipline being addressed

Training and Development Theories and Techniques Understanding: Knowing the theories and methods used in training; understanding their appropriate uses (pp. 41-42, 267-271).

McLagan and Suhadolnik (1989) define the role of program designer as "preparing objectives, defining content, and selecting and sequencing activities for a specific intervention" (p. 48). Since college faculty who conduct workforce training would typically perform this role, the competencies identified for "program designer," and those not already listed for the role of instructor/facilitator, include:

Competency Identification Skill: Identifying the knowledge and skill requirements of jobs, tasks, and roles

Information Search Skill: Gathering information from printed and other recorded sources; identifying and using information specialists and reference services and aids

Model Building Skill: Conceptualizing and developing theoretical and practical frameworks that describe complex ideas in understandable, usable ways

Project Management Skill: Planning, organizing, and monitoring work

Writing Skill: Preparing written material that follows generally accepted rules of style and form, is appropriate for the audience, creative, and accomplishes its intended purpose (p. 49, 267-271).

The work of Furst-Bowe (1996) involved a survey of training professionals regarding the use of instructional technologies. Respondents indicated that "the ability to use or assist trainees in the use of the technology was the most highly needed competency" (p. 236). This study further concluded that "it is far more important for trainers to be able to use and evaluate new technologies than to be able to design and develop their own programs and systems" (p. 236). McLagan and Suhadolnik (1989, p. 268) present this type of competency as "Electronic Systems

Skill: Knowledge of functions, features, and potential application of electronic systems for the delivery of and management of HRD (such as, CBT, teleconferencing, expert systems, interactive video, satellite networks)."

Emerging Instructional Technology Competency Needs in Workforce Training

The nature of corporate training is rapidly changing with the availability of sophisticated forms of instructional technology. The corporate trainer's role is evolving to become one of facilitator, mentor, and someone who guides employers and workers to use the best and most timely training available. The corporate trainer needs to find, interpret, and assess the wide range of technological products available (Leonard, 1996, p. 1).

Doucette (1994) conveys that, "the use of technology to provide training is an expectation of business and industry, where technological applications are pervasive and valued" (p. 226). Leonard (1996) points to some organizations (AT&T, Ford Motor Co., Intel Corp., Aetna Life & Casualty, and the U.S. Government) who have already seized opportunities which have placed them on the leading edge of successfully integrating technology into workforce training programs (p. 2). Doucette further suggests that investment by business and industry in instructional technology will be accepted as long as a return on investment can be realized and documented through learning outcomes. The workplace will serve as the classroom for many adults and alternative delivery models can readily be piloted there (pp. 226-227). The 1993 study conducted by the League for Innovation in the Community College reveals, however, that the majority (nearly 85%) of training provided to business and industry by community colleges uses traditional methods such as lecture, discussion, and hands-on training, rather than emerging instructional technologies (Doucette, 1993, p. 7).

Israel (1994) discusses the vast quantity of information and knowledge that instructors/trainers as "knowledge choreographers" need to manage and suggests that they must employ available technologies such as interactive video, telecommunications, computer-aided instruction, and virtual reality (p. 95). New learning technologies, however, allow learners to make choices about what is important for them to learn, providing needed information to employees when it is needed. "These technologies are interactive, dynamic, and--here's the rub--they are designed to boost performance, not necessarily provide training. It's a subtle distinction, but an important one" (Caudron, 1996, p. 32).

The results of Furst-Bowe's (1996) study involving business and industry training professionals indicate that the private sector is using a wide range of technologies. The technologies in use by at least 50% of the respondents include computer-based training, computer tutorials, computer simulations, computer presentation systems, presentation software, electronic performance support systems, on-line help systems, information databases, multimedia systems, LCD panels, LCD video/data projectors, and local area networks. These are also the same technologies that respondents indicated they plan to use in the next three years (p. 235).

The 1996 Furst-Bowe study further concludes that ". . . a lack of time and a lack of financial resources are the major barriers in implementing instructional technology in training efforts," (p. 236) cited by approximately 75% of the respondents. To develop trainer competency in instructional technology, vendor-sponsored training and self-study methods are the most preferred while attending seminars, workshops, or conferences are frequently identified as appropriate for learning some technologies (p. 236). "In important ways, business and industry training provides an ideal environment in which to test the economic feasibility of alternative learning models--not only in the marketplace of ideas, but in the marketplace" (Doucette, 1994, p. 226).

"The use of computers, distance learning, and other technology is expanding rapidly. Faculty and staff need to learn how to use new technologies to enhance the students' learning opportunities" (Smith & Beno, 1995, p. 173).

Characteristics of Exemplary Instructors/Trainers

"Accompanying recent unprecedented growth in corporate training is a growing interest in understanding more clearly what factors contribute to high quality instruction and what distinguishes the best private sector instructors from their colleagues" (Leach, 1996, p. 7). Best practices are often identified through benchmarking efforts, a review of the literature, or by observing and interviewing exemplary performers. Best practices involve what the very best performers actually do on the job to achieve high levels of performance results (Robinson & Robinson, 1996, p. 100).

Leach (1996) describes a 1982 study by Schneider and Klemp that identified competencies of exemplary teachers of adults in degree programs. These faculty (a) have a student-centered orientation, (b) have a humanistic learning orientation, (c) create a context conducive to adult learning, (d) ground learning objectives in an analysis of student needs, and (e) facilitate the learning process (p. 8). A 1996 study conducted by Leach attempts to describe the characteristics that differentiate exemplary instructors from average instructors. This research was conducted in a variety of business and industrial settings in Illinois and Indiana. The results of this study indicated that "there is little difference between exemplary trainers and their average counterparts with regard to their perceived competence associated with instructional skills and techniques. What distinguished the exemplary trainers in this study is their ability to translate espoused personal characteristics into discrete tangible behaviors" (pp. 13-14). This study produced an "Exemplary Trainer Profile" which focuses on the following components: (a) responsiveness, (b) enthusiasm/high energy, (c) humor, (d) sincerity/honesty, (e) flexibility, and (f) tolerance (pp. 13-16).

From the study conducted by Leach (1996), the question of the effect of experience on the quality of a trainer's performance emerged. Average training staff in this study possessed approximately four years of experience while the exemplary trainers had approximately nine years of experience. Leach suggests that the question of the extent to which difference in performance is solely a function of experience needs to be investigated (p. 16). Further, the work of Leach (1996) goes on to state that:

> Much of the emphasis has been on discovering what trainers need to know to be effective. Basing hiring decisions and staff-development activities on information obtained by identifying the best trainers and determining what they do to achieve exemplary results will, by itself, not create a staff of star performers. Exemplary performance in any field is usually the result of a variety of factors including effective management and well designed jobs and organizations. However, basing training staff assessment and development decisions and activities on proven accomplishments and behaviors of exemplary trainers rather than solely on knowledge of subject matter content and training methods appears to hold promise. (p. 16)

Mager (1996, pp. 52-53) indicates key characteristics of the twenty-first century trainer. Trainers must be:

1. Performance-oriented--being in the performance business, not the education and training business. "Those who continue to see training as the solution to every performance problem are already behind the curve" (p. 52).

2. Technically skilled--skilled performance professionals.

3. Socially skilled--well-honed interpersonal skills to work with a wide variety of people in the organization.

4. Self-employable--independent contractors, whether working inside or outside a large organization.

5. Bilingual--the center of the economic universe is moving to the Pacific Rim.

6. Internationally qualified--ability to take overseas assignments.

The competency model is appropriate and has several benefits when considering the knowledge and skills required in a job and to assess job performance (Parry, 1996, p. 50; Robinson & Robinson, 1996, pp. 110-111, 141). A number of sources address the knowledge, skills, and attitudes expected of community college faculty and of instructors/trainers in business and industry (Bergman, 1996, p. 13; Israel, 1994, p. 95; Leach, 1996, p. 8; McLagan & Suhadolnik, 1989, pp. 39, 41-42, 48-49, 267-271; Mussnug & Lyons, 1994, pp. 21-23). Competency in instructional technology application is clearly emerging as an expectation of instructors/trainers in workforce training (Doucette, 1994, p. 226; Furst-Bowe, 1996, pp. 235-236; Israel, 1994, p. 95). Finally, there may be a fine line between exemplary trainers and average trainers in terms of perceived competency levels. Exemplary trainers' ability to translate perceived personal attributes into concrete behaviors would seem to be a defining difference (Leach, 1996, pp. 13-16).

Faculty Development in Community Colleges

> No segment of U.S. higher education is more dedicated to effective teaching and learning than the community colleges. This dedication is borne out by the fact that no segment invests as much time, money, and energy in faculty development to enhance instructional effectiveness. Nationwide, faculty development is big business in community colleges. (Angelo, 1994, p. 123)

Maxwell and Kazlauskas (1992) suggest a less impressive outcome from faculty development in community colleges in spite of this commitment of resource. They acknowledge that faculty development programs are widespread and generally accepted, however, they also state that these programs "muster only moderate or even little participation, often are relatively ineffective, and have particularly little impact on those who most need to improve their teaching" (p. 352).

Boone (1997) expresses the critical need for community colleges to remain on the "cutting edge" by embracing and supporting the continuing professional development of staff at all levels (administrators, faculty, and support staff). "The continuing knowledge explosion and phenomenal breakthroughs in management and instructional technology are forces that affect every aspect of management and instruction in our community colleges" (pp. 9-10). These institutions are likely to play a dominant role in creating opportunities and providing support for the professional development of its staff, but all faculty and staff must also become self-directed, lifelong learners who take responsibility for their own professional development (Boone, 1997, p. 10; Powers, 1992, p. 182). To reiterate Seymour's (1992) position, ". . . education is not an expense. It is an investment in the human capital of an organization" (p. 16) [including educational organizations]. The study conducted by Grubb et al. (1997) points out that when policies and practices place the responsibility for professional development on individual faculty rather than on the colleges, they contribute to the skills gap "by failing to assure that faculty have the time and information essential to keeping up to date" (p. 36).

The work of Copa and Ammentorp (1997) considers design specifications for learning staff and staff development. One of these specifications calls for two-year colleges to:

> . . . recognize the value of lifelong learning for all staff, view lifelong learning as a shared responsibility of individual and institution, provide renewal opportunities in multiple formats, and commit resources (e.g., time, substitutes, and space) for staff development. (p. 15)

"Ultimately, the success or failure of any program is based upon the activities of the people most responsible for day-to-day work within the community colleges" (Jacobs, 1992, p. 62). Jacobs supports the creation of a process for continuous professional development of practitioners in workforce development within and between colleges. Kantor (1994b) points out that there are a growing number of faculty development programs that address teaching on the end of the continuum focusing on entry-level workers. "However, recent national and state studies have revealed little or no literature that addresses training for the skills needed to teach the learners on the other side of the continuum--those in business and industry" (Kantor, 1994b, p. 5). The need to focus on staff development for faculty who conduct workforce training is also addressed in the following recommendation by the American Association of Community Colleges:

> Community college leaders need to conduct ongoing staff development programs to educate their faculty about the needs and learning styles of adult workers, to learn about new delivery mechanisms and instructional methodologies for providing effective training for adults, and to update faculty skills continually so that they can be effective trainers for skills currently needed in the workplace. (1994, p. 54)

McCabe (1994) also supports staff development programs by colleges and recognizes the significant commitment of resources such programs require. McCabe further proposes that staff development programs need to be comprehensive, including workshops and seminars, a focus on the use of technology, support for the design and implementation of strategies to improve learning, and a provision to assist faculty in continuing their formal education (p. 49).

Angelo (1994) considers the response of community college instructors to faculty development programs and contends that, in spite of the fact that many have doubts and misgivings about such programs, they generally believe in the "bright promise" inherent in faculty development. Faculty believe that the quality and effectiveness of teaching and learning can--and should--be improved. And they also believe that working with colleagues on faculty development offers the best chance of realizing that promise (p. 115). Powers (1992) expresses concern that staff development in most organizations is too often aimed at "stars" and "fast-trackers" and sees this as a major mistake. The majority of instructors are not "stars" or "fast-trackers," but have a critical need for development opportunities. Powers views development as a means to create excellent performance in all instructors (p. 182).

The concept of employee vitality seems to be significant in determining the vitality and well-being of organizations, including educational organizations. A study conducted by the Wisconsin Technical College System revealed that vitality, commitment, and innovation in two-year college occupational faculty is characterized by the following four areas of professional activity: (a) commitment to teaching and learning, (b) initiative in curriculum development, (c) initiative in professional role, and (d) professional development activities. "These professional activities, when considered together, suggest a state of academic generativity in which the faculty member is future-oriented, willing to accept and initiate change, and committed to the professional role and the institution (Schwandt, 1996, pp. 308-309). Brown, Daniels, and Sanchez (1996) describe achieving vitality as "the creation of an environment encouraging faculty to achieve their highest level of professional development" (p. 3) and suggest that the loss of faculty vitality in an organization is easy to recognize. Faculty do not participate in activities that require any time outside the classroom, refuse to stay for late afternoon department meetings, avoid having classes scheduled on Friday, and do not want to participate in functions such as commencement. Faculty who lack vitality also stop reading journals and staying abreast in their disciplines, and tend to jettison major student assignments or projects within their courses (pp. 3-4).

Faculty development is further reviewed in the following sections beginning with trends in community college faculty development including the focus on effective teaching and learning, and improving job performance. Additional sections cover needs assessment, barriers to faculty participation in faculty development programs, and strategies for faculty development.

Trends In Community College Faculty Development

Angelo (1994) presents seven interrelated trends that have created challenges and opportunities for faculty development in community colleges. Given these trends, Angelo predicts that institutional commitment to faculty development efforts is likely to remain steady or grow in the future (p. 124). These trends include:

1. Continuing public and political pressures to improve the quality of higher education
2. An increasing level of competition for funding
3. A rise in educational consumerism
4. Changing faculty demographics
5. Growing diversity in the student body
6. An expanding base of useful, relevant research about college teaching and learning
7. A rising level of faculty development expertise (p. 119).

Freed, Klugman, and Fife (1997) address the trend toward incorporating quality principles in higher education. They point out that if senior leaders of an institution are serious about continuous improvement, employee empowerment, and meeting customer demands, resources need to be provided to help staff acquire the knowledge and skills necessary to make this transformation (p. 81). They contend that "systematic individual development through continuous education and training is necessary if institutions are ready to address the one constant of organizational survival: being able to meet stakeholders' changing expectations" (pp. 83-84).

In a survey of workforce training professionals conducted by AACC in 1993, "professional training for faculty was deemed essential for community colleges to successfully move from traditional vocational education to workforce training" (Falcone, 1994, p. 6). Kantor's (1994b) work also recognizes the need for faculty development to address the workforce training mission of community colleges:

> As the mission of community colleges expands to educate learners all along the continuum, including those who are fully employed, the colleges will need to prepare their workforce to accommodate that mission. The extent to which a higher education institution engages in training its workforce in customized training and to expand faculty ability to teach all along a continuum will depend on the institution's commitment to workforce training. From commitment will come the resources, creativity, and motivation needed to train the workforce within as well as outside the college. This commitment is critical to carrying out the expanded mission of economic development. Clearly, the training will have to be customized to accommodate each college . . . (p. 10)

Focus on Effective Teaching and Learning

> The community college prides itself on being a 'teaching college,' and many individual instructors are exemplary teachers. In addition, some community colleges have made a series of institutional commitments to improve the quality of teaching, focusing many of their policies, as well as the attention of administrators, on the improvement of teaching. (Grubb, et al., 1997, p. 47)

O'Banion's (1994) work describes the enormous diversity that occurs in American community colleges and the challenges this diversity, in all forms, presents. He states that, ". . . teaching and learning will become even more visible and more significant as instructors respond to the overwhelming challenge of providing successful educational opportunities for the most diverse group of college students in the history of the world" (p. 14). Part of this diversity includes the clients served and employees trained under contracts for services with business and industry, a constituency that will call for a re-examination of approaches to teaching and learning. O'Banion further describes this impact:

> . . . in contracts with business and industry, community colleges will learn new ways of assessing client needs, new ways of delivering instruction, and new ways of evaluating success, their own success as instructors and the success of their clients. These experiences may influence the more traditional college programs. The business and industry institute or program has the potential of becoming an in-house experimental laboratory in teaching and learning for the rest of the college. In this way, teaching and learning may be reviewed by traditional faculty members with fresh perspectives. (pp. 14-15)

According to Angelo (1994), ". . . improving the quality of teaching and learning is the primary mandate for community colleges in the 1990s. To fulfill this mandate, they must find ways to realize the promise of faculty development" (pp. 115-116). Angelo contends that instructional development, aimed at improving teaching effectiveness, should be the primary focus of faculty development efforts (p. 118).

Copa and Ammentorp (1997), in their work on new designs for two-year colleges, further describe the direction of teaching and learning:

> . . . those who do the work of teaching and learning will do less instruction and more knowledge construction and problem-solving with students. Learning staff will connect the learner to a learning context, such as a hospital, private firm, or government agency; in other instances, the connection will be made through simulations and case studies. (p. 15)

Improving Job Performance

> When the customer is the only source of security, then security has to be continuously earned. Therefore, in a fundamental way, organizations cannot promise security because they don't have it. Organizations have to earn security through performance. And so they must demand performance from their employees, those individuals who make up the organization. No organization can afford to carry unproductive people anymore. (Bardwick, 1995, pp. 14-15)

Swanson (1994, p. 3) describes the role of performance improvement in organizations as taking on strategic proportions. These strategies include human resource development, quality improvement, reengineering, and performance technology. Organizations spend millions each year on development efforts aimed at employees and customers. While performance gains can be made through development efforts, money spent on programs based on erroneous assumptions yields little for both the organization and the participants. Swanson goes on to suggest a number of reasons that employees may fail to meet performance expectations:

> . . . they do not have the aptitude (capacity) to perform; they do not have the know-how (expertise) to perform; they choose (motivation) not to perform; they do not have the proper tools, equipment, or environment (systems design) to perform; or performance expectations (goals) are not clearly defined in the first place. Thus, beyond the lack of knowledge or skill (which is most often addressed by training), individual performance problems can be attributed to low aptitude, a lack of motivation and incentives, and poor work environment. (p. 70)

There is another side to performance, of course, as noted by Rothwell and Kazanas (1994). When people excel, the organization outperforms competitors, individuals rise above minimum standards, and performance results exceed expectations. In this case, conditions exceed criteria. When such favorable discrepancy stems from knowledge and skill, it is a special talent or competency (p. 83).

Rothwell and Kazanas (1994) believe that training can improve job performance by (a) improving individual abilities, (b) stimulating motivation, (c) matching individual ability to job requirements, and/or (d) matching the individual to contextual requirements. Training, however, cannot change job activities or the work context. Rather, it allows individuals to change by furnishing them with new knowledge and skills pertaining to their work (p. 399). In contrast, Robinson and Robinson (1996, p. 5) state that traditional training approaches to impact performance change are not working. This is primarily because a systems approach is not being used in resolving performance problems, despite the fact that leaders in the field have written about performance approaches for thirty years.

Swanson (1994) suggests that "regardless of the approach used, the standard performance improvement model includes five phases: analysis, design, development, implementation, and evaluation" (p. ix). At a minimum, performance improvement proposals should include the following elements: (a) performance gap, (b) performance diagnosis, (c) recommended interventions, and (d) forecasted benefits (p. 69).

Needs Assessment

The work of Rothwell and Kazanas (1994, p. 81) focuses extensively on the concept of needs assessment, indicating that an instructional need exists when there is a deficiency between the present condition and the criteria or expectation. They stress that instructional need implies that the deficiency stems from a lack of learner knowledge or skill and remind readers that needs can stem from other causes (e.g., poor job structure, low motivation or morale, poor work incentives, lack of ability), and these needs cannot be met through education, training, or development.

Rothwell and Kazanas (1994) state that needs assessment is really a form of deficiency analysis--uncovering areas in which present conditions are less than the desirable conditions. Human resource development practitioners have long viewed instruction as a means of rectifying deficiencies or solving performance problems (p. 83). Training needs assessment can provide detailed information on the present conditions (p. 399), however, "if needs are improperly identified, no amount of instruction will meet them" (p. 403). McHargue (1996) also stresses that professional development efforts need to reflect a comprehensive and accurate assessment of needs (p. 3). Rothwell and Kazanas discuss surveys as a means of conducting needs assessments:

> Surveys are sufficiently flexible to be used in identifying training, education, or development needs. Surveys on job requirements help identify training needs; surveys on education or experience in preparation for promotion help identify educational needs; surveys on work group skills help identify employee development needs; surveys on intragroup or group feelings help identify organization development needs; and surveys of consumers, stockholders, suppliers, distributors, and the general public help identify nonemployee development needs. Like interviews, surveys can focus on uncovering deficiencies (weaknesses) and proficiencies (strengths). (1994, p. 99)

Barriers to Faculty Participation in Faculty Development Programs

Angelo (1994) indicates that survey research and anecdotal evidence confirm that most instructional improvement programs in colleges suffer from the following problems: (a) a relatively small percentage of faculty take advantage of development programs; (b) the faculty who do participate in teaching improvement efforts are typically the ones who need them least; and (c) most faculty development efforts result in little, if any, measurable long-term improvement in teaching and learning (pp. 124-125). Angelo explores a number of reasons for limited involvement in organized faculty development efforts on campus and outlines the following seven common barriers that need to be removed or lowered to involve a greater percentage of faculty as well as recommendations for addressing these barriers:

1. Most faculty development efforts focus primarily on improving teaching and little, if at all, on improving learning. Shift from trying to make teachers better performers to helping faculty help students perform better.

2. Many programs try to develop faculty, rather than helping them become self-developing. Shift from providing general teaching solutions to helping faculty discover, define, and respond to the specific questions and problems in their classrooms.

3. Many programs do not recognize the importance of discipline-specific ways of knowing, teaching, and learning in colleges. Engage faculty in teasing out the implications and applications of research to their specific disciplines, courses, and students.

4. Many teachers fail to recognize the need for and potential usefulness of faculty development activities in their own teaching. Assist faculty as members of departmental, program, and institutional teaching-learning communities, rather than individual faculty members.

5. Many programs fail to capitalize effectively on faculty motivation. Appeal to a wide range of more intrinsic, longer-term motivations to participate.

6. Many programs are perceived to lack intellectual substance. Shift from asking what works to asking what works for whom, when, where, how, and why.

7. Many programs are not planned and organized for success. Aim for and assess long-term improvements in teaching and learning performance. Program success cannot be measured only in terms of faculty participation and satisfaction rates (1994, pp. 126-138).

Strategies for Faculty Development

Angelo (1994) proposes three ways of focusing on improving the quality of higher learning that would represent a significant shift from most current faculty development practices:

> First, a transformative agenda would focus directly on helping faculty help their students improve learning, and only indirectly on improving teaching. Second, it would promote faculty and student self-awareness, self-assessment, and self-improvement. And third, it would help faculty understand and evaluate the potential applications of traditional research on teaching and learning to their own courses and students. (pp. 131-132)

Senge et al. (1994) contend that ". . . no one can increase someone else's personal mastery. We can only set up conditions which encourage and support people who want to increase their own" (p. 193). Travis (1995) describes the importance of facilitated sharing by faculty of their experiences and expertise:

> If faculty are both the preferred developers and dispensers of innovations in the classroom, then techniques to facilitate their sharing should enhance the improvement of teaching and learning. The key, of course, is to conceive of a method to bring faculty together to facilitate this kind of sharing. (p. 35)

Powers (1992) points out that training represents one of the most common forms of instructor development (p. 201). New faculty need to be equipped with the knowledge and skills to meet instructor performance standards and experienced faculty may need to upgrade and strengthen their skills (Powers, 1992, p. 201; Smith & Beno, 1995, p. 173). However, Rothwell and Kazanas (1994, pp. 402-403) strongly encourage human resource development practitioners to consider alternatives to classroom training, examining the following issues as a preliminary step:

1. Problem(s) to be solved--do they lend themselves to solutions other than classroom training?

2. Timeframe--how much time is there to develop and deliver classroom training?

3. Expertise--does the requisite expertise exist within the organization or does it need to be obtained externally?

4. Resources--what resources are available and are they adequate to fund training design and delivery?

5. Importance--how important is the problem to the organization?

6. Scope of the problem--how many individuals, departments, and divisions of the organization are affected?

7. Need for consistency--is there a special need for imposing consistent application of policies and/or procedures?

Rothwell and Kazanas (1994) provide the following summary recommendation with regard to classroom training:

> Classroom training is appropriate only when the performance problems lend themselves to no other solutions, time frames are adequate, expertise is available, resources are adequate, the problem is important, many people are affected, and the need for consistency is great. (p. 403)

Powers (1992) contends that of all types of programs that can be utilized in developing excellent instructors (e.g., courses, skill development programs, seminars), "none is as important as the program to equip instructors to deliver training in accordance with specified standards of performance--the basic train-the-trainer program" (p. 201) in yielding long-term results. Jacobs (1992) supports the notion of conducting annual train-the-trainer workshops, involving multiple colleges, and sees this strategy as a way to strengthen a network of trainers and training directors (p. 62). In that ". . . faculty tend to be more receptive to instructional input from other faculty" (Travis, 1995, p. 36), "properly facilitated shop talk can be the highest form of staff development" (Gottshall, 1993, p. 7).

A strategy developed by Colorado community colleges involves developing and conducting a workshop that examines the similarities and differences in teaching the yet-to-be-employed and the fully employed learner. Participants then progress to identifying the implications and strategies for faculty who teach in business and industry (Kantor, 1994b, p. 8). Kantor further proposes that shadowing of customized trainers by faculty and mentoring by customized trainers are two more ways to increase faculty's awareness of and exposure to this work. Team training is another strategy that should be considered (p. 9). Froiland (1993) indicates that "attempting to improve performance of others by using master or star performers as models has been advocated for many years and has been used with some success in a number of large companies" (p. 33). There is great value in working in partnership with the individuals in the college who are responsible for faculty development programs to ensure that faculty are supported and trained to teach all across the instructional continuum (Kantor, 1994b, p. 9). Israel (1994) recommends the establishment of instructional design centers to support customized trainers. These teaching, learning, and research centers should also be made available to business and industry on a contract basis. Such centers should be able to respond rapidly to the design, development, and implementation of programs to accommodate business and industry needs (p. 95). Grubb et al. (1997) also point out that community colleges interested in improving teaching and learning invariably include these types of teaching centers in their efforts. "Such centers provide ongoing staff development (rather than one-shot workshops) about teaching methods, mentorships, seminars for new instructors, minigrants for curriculum innovation, curriculum and resource materials, and other sources of support for quality teaching" (p. 47).

In creating a professional development plan, Smith and Beno (1995) illustrate the importance of linking goals, needs, staff development activities, and evaluation. They propose a planning format that includes the following components: (a) institutional goal, (b) staff development program goal/need, (c) measurement of goal, (d) professional development activity, and (e) measurement of progress (pp. 175-176).

A number of key trends are impacting faculty development in community colleges (Angelo, 1994, p. 119). Improving the quality of teaching and learning through faculty development is viewed as being central to a college's success (Angelo, 1994, pp. 115-116, 118; Falcone, 1994, p. 6; Freed et al., 1997, pp. 83-84; Grubb et al., 1997, p. 47; Kantor, 1994b, p.

10). Excellent employee performance is key to any organization's competitiveness (Rothwell & Kazanas, 1994, p. 83); however, there appears to be some debate as to whether or not training should be the primary intervention in efforts to improve job performance (Robinson & Robinson, 1996, p. 5; Rothwell & Kazanas, 1994, p. 399). Professional development efforts should be grounded in a comprehensive and accurate assessment of employee needs (McHargue, 1996, p. 3; Rothwell & Kazanas, 1994, pp. 81, 83, 99). Substantial barriers to the participation of faculty in professional development programs are noted in this review (Angelo, 1994, pp. 124-138) as well as a number of strategies to eliminate these barriers and develop successful programs (Angelo, 1994, pp. 124-138; Grubb et al., 1997, p. 47; Kantor, 1994b, p. 8; Powers, 1992, p. 201; Rothwell & Kazanas, 1994, p. 403; Smith & Beno, 1995, pp. 175-176).

Evaluation Research

The following sections on evaluation research consider the roles and purposes of evaluation and surveys as an approach to evaluation. Further, implementation strategies are reviewed, including sampling and response rates, as well as data collection and analysis.

Roles and Purposes of Evaluation

As defined by McMillan and Schumacher (1993), evaluation is "the application of research skills to determine the worth of an educational practice" (p. 518). They go on to suggest that presently evaluation studies are used to make or to justify value decisions in many aspects of education (p. 519). Summative evaluation can be conducted once a program or activity has been fully developed and implemented to determine its effectiveness. "Summative evaluation can aid educators who make purchase or adoption decisions concerning new programs, products, or procedures" (p. 521).

McMillan and Schumacher (1993) indicate that "the three major reasons for conducting evaluation research are planning, improving, and justifying (or not justifying) procedures, programs and/or products" (p. 520). From a research perspective, evaluation requires a formal design and procedures to collect and analyze data systematically for determining the value of a specific educational practice (p. 520). McMillan and Schumacher provide an overview of a number of evaluation approaches. The major evaluation approach that most directly relates to this study is the objectives-oriented approach, in which "the focus is on specifying goals and objectives and determining the extent to which they have been attained" (p. 525).

Surveys as an Approach to Evaluation

Isaac and Michael (1990) indicate that surveys are the most widely used technique in education for the collection of data, including a means for gathering information on attitudes and opinions. This information can then be used to determine whether or not specific objectives have been met, to establish baselines for future comparisons, and to describe an existing state, among other uses (p. 128).

Rahilly (1992) proposes a research design model to develop a successful survey project that involves the following eight steps:

1. Determine the research objectives, considering how the information gathered will be used, the decisions that need to be made, and the follow-up actions that will need to be taken.
2. List the needed data or the questions that need to be answered.
3. If necessary, make a preliminary investigation such as conducting focus groups or a pilot of the survey.
4. Determine who is to be surveyed and how they will be selected.
5. Select the appropriate type of survey (telephone, mail, or personal interview).

6. Create the questionnaire and test it.

7. Collect the data.

8. Analyze the data (pp. 4-5).

Isaac and Michael (1990) propose a set of guiding principles that should underlie surveys. Surveys should be (a) systematic--carefully planned and executed to ensure that the appropriate content is covered and that data is efficiently collected; (b) representative--closely reflecting the population, either by including everyone or by using scientific sampling procedures; (c) objective--ensuring that the data are as observable and explicit as possible; and (d) quantifiable--yielding data that can be expressed numerically (p. 128).

It is also important to recognize the limitations inherent in surveys as a methodology in that they run the risk of generating misleading information. This can occur in that surveys (a) only tap respondents who are accessible and cooperative; (b) often make respondents feel special which may produce responses that are slanted or artificial; and (c) are vulnerable to over-rater or under-rater bias, with tendencies to give consistently high or low ratings (Isaac & Michael, 1990, p. 128).

Implementation Strategies

As survey implementation strategies, sampling and response rates need to be considered. Data collection and analysis techniques are further components for review in evaluation research.

Sampling and Response Rates

Isaac and Michael (1990) recommend that "whenever practical, especially if a survey touches on controversial matters or will lead to an important decision or conclusion, it is well to include all possible respondents" (p. 132). McMillan and Schumacher (1993) concur that "the general rule in determining sample size is to use the largest sample possible, since the larger the sample the more representative it will be of the population" (pp. 163-165).

If surveying the total population is not practical, sampling is both appropriate and scientifically sound, as long as established procedures are followed. The most common technique is to sample at random, where each individual in a population has an equal chance of being selected. The two principle variations of random sampling are (a) simple random sampling--taking every nth name in an alphabetical listing or going to a table of random numbers; and (b) stratified random sampling--where various strata are used such as gender, age, or grade levels, and predetermined proportions (e.g. percentages) of respondents are then randomly selected from each grouping or stratum (Isaac & Michael, 1990, p. 132; McMillan & Schumacher, 1993, pp. 159-163).

Suskie (1992) discusses four factors that are most likely to affect the response rate to a survey instrument. These factors include the topic of the survey, the people being surveyed, how considerate you are of your respondents, and how professional and important the study appears (p. 25). While several authors address what constitutes an acceptable response rate for a mailed questionnaire, indicating that at least a 50% response rate is needed for a survey to be statistically useful, 60-69% is considered a good response rate, and 70% or greater is considered very good (Busche, 1995, p. 4; Ryan, 1993, p. 43; Suskie, 1992, p. 46).

Data Collection and Analysis

According to McMillan and Schumacher (1993), the questionnaire and personal interview are the most frequently used techniques for collecting data. When used in a survey, the techniques must be standardized, so that information from each respondent is gathered in the same manner, including administration, format, and sequence (p. 281). In most cases, the written questions are exactly what will be asked orally, giving room for the interviewer to record the answers, and allowing for appropriate probing questions for clarification (p. 251).

Statistical techniques are used in data analysis and will vary based on the purpose of the study, sample size, and the types of scales used in the instrument--categorical, nominal, or interval. A statistical technique should be selected on the basis of appropriateness to the research question; nothing is gained by using a complicated technique when a simple one will suffice (McMillan & Schumacher, 1993, p. 571). Isaac and Michael (1990) suggest that good planning in research or evaluation studies anticipates the problem of data analysis. Appropriate statistical techniques are foreseen and the manner of their application is specified (p. 157).

Evaluation research serves as a fundamental decision-making process in education (McMillan & Schumacher, 1993, pp. 518-521). Surveys represent the most widely used technique in conducting evaluation research (Isaac & Michael, 1990, p. 128). Specific implementation techniques and process steps for evaluation research are well documented in the literature.

Summary

Rapid change is transforming the American economy and the American workplace (Hernandez-Gantes et al., 1995, p. 4; Jones, 1996, p. 21; Zeiss, 1997b, p. xiii). Education and training is widely recognized as making a significant contribution to both the strength of the economy and the well-being of society in general (American Association of Community Colleges, 1993, p. 3; Price Waterhouse, 1994, p. E1; Robinson & Robinson, 1996, p. ix). Workplace changes and increased competition are creating an increase in the demand for highly skilled workers at all levels who can adapt and function in high performance jobs. The vast majority of employers recognize the importance of training to their ability to remain competitive and to their companies' futures (Caudron, 1996, p. 32; Price Waterhouse, 1994, p. 7, 18).

Employers, as customers of workforce training, expect the same kind of responsiveness that is being demanded of other service operations including flexibility, customization, value, ease of access, speed, low cost, and no hassle (Caudron, 1996, p. 32; Kantor, 1997, p. 30; Shaw, 1997, p. 2). Colleges that provide workforce training services to this customer group will need to rethink and reengineer their traditional approaches to service delivery in areas such as curriculum development, delivery methods, business practices, and systems of accountability (Hough, 1994, pp. 6-7). The literature suggests that higher education will need to become thoroughly customer-driven to be successful in the workforce training arena (Eisen, 1997, pp. 20-22; Oregon Business Council, 1996, p. 3-4; Swanson, 1994, pp. 15-16).

Virtually all community colleges provide workforce training to employers (American Association of Community Colleges, 1993, p. 4; Bosworth, 1997, p. 12; Doucette, 1993, p. iii; Stamps, 1995, p. 37) and although they have come a long way in the last decade (Eisen, 1997, p. 20; Jacobs, 1995, p. 2) they will need to adapt continually to meet the ever changing needs of companies and serve as learning consultants by establishing partnerships with employers. Basic components of a comprehensive workforce training program that community colleges will need to continue to develop include flexibility, responsiveness, cost effectiveness, accountability, and quality (Carreon, 1996, p. 4; Eisen, 1997, pp. 20-22; Kantor, 1997, p. 29; Zeiss, 1997a, pp. 26-27).

The literature suggests that, overall, community college faculty are well-suited to conducting workforce training as they are "the most creative, innovative, and flexible teachers in education" (O'Banion, 1994, p. 14), and have a considerable track record in working with adult learners (Doucette, 1993, pp. 21-22; Jacobs, 1995, p. 2). Conducting workforce training poses some unique challenges to faculty including delivering in new settings, customization of curriculum, and varying audience cultures, all of which significantly impact an instructor/trainer's flexibility, ability to adapt, and responsiveness (Kantor, 1994b, pp. 7-9; Karre, 1997, pp. 28-29; O'Banion, 1994, pp. 15-16).

Using competencies as the vehicle for identifying knowledge, skills, and attitudes of a particular job function is well supported in the literature (Parry, 1996, p. 48, 50; Robinson & Robinson, 1996, p. 141, pp. 110-111). A number of sources speak to the various knowledge, skills, and attitudes needed by individuals who serve as corporate trainers (Bergman, 1996, p. 13; Furst-Bowe, 1996, p. 236; Israel, 1994, p. 95; Leach, 1996, p. 8; Mussnug & Lyons, 1994, pp. 21-23). One of the most extensive studies conducted involving competencies of training and development roles was the study commissioned by ASTD in 1987 which identified the specific competencies of a number of job functions including instructor/facilitator and program designer (McLagan & Suhadolnik, 1989). One area that was not addressed to a great extent in the ASTD study is the emerging use of instructional technology in workforce training. There is strong evidence to suggest that various forms of instructional technology applications are clearly a factor in workforce training today (Caudron, 1996, p. 32; Doucette, 1994, p. 226-227; Furst-Bowe, 1996, p. 235; Smith & Beno, 1995, p. 173), however, as of 1993, nearly 85% of training provided to business and industry by community colleges is done using traditional methods rather than emerging instructional technologies (Doucette, 1993, p. 7).

Faculty development is clearly a priority of community colleges (Angelo, 1994, p. 123; Maxwell & Kazlauskas, 1992, p. 352); however, little or no literature addresses training for the skills needed by faculty who teach in business and industry (Kantor, 1994b, p. 5). There is significant support for community colleges to provide faculty development opportunities, encouraging them to achieve the highest levels of professional development (American Association of Community Colleges, 1994, p. 54; Boone, 1997, pp. 9-10; Brown et al., 1996, p. 3; Freed et al., 1997, pp. 83-84; Jacobs, 1992, p. 62; Kantor, 1994b, p. 10; McCabe, 1994, p. 49; Powers, 1992, p. 182; Schwandt, 1996, pp. 308-309; Seymour, 1992, p. 16). The literature also provides an extensive perspective on a number of barriers to faculty participation in faculty development programs, related issues, and recommendations/strategies for success with such programs (Angelo, 1994, pp. 126-138; Froiland, 1993, p. 33; Israel, 1994, p. 95; Jacobs, 1992, p. 62; Kantor, 1994b, pp. 8-9; Powers, 1992, p. 201; Rothwell & Kazanas, 1994, pp. 402-403; Smith & Beno, 1995, p. 173; Travis, 1995, p. 35-36).

The role of evaluation research is to determine the worth of an educational practice. The purposes of evaluation include planning, improving, or justifying educational procedures, practices, or programs being studied. Evaluative research requires a formal design and process to systematically collect and analyze data for decision-making (McMillan & Schumacher, 1993, p. 518, 520). The literature provides a significant amount of direction for the design and development of an evaluation study and implementation strategies including sampling, response rates, data collection techniques, and statistical techniques for data analysis (Isaac & Michael, 1990; McMillan & Schumacher, 1993; Suskie, 1992).

Chapter 3

METHODOLOGY AND PROCEDURES

Methodology

This major applied research project incorporated the evaluation and development problem-solving methodologies to address the following research questions:

1. How pervasive is the need for employer-contracted workforce training for incumbent workers?

2. To what extent do community and technical colleges need to prepare to respond to the training and re-training needs of employers and the employed workforce?

3. What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?

4. How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?

5. How do the employer clients of FVTC's contracted workforce training programs rate the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?

6. Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?

7. What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?

The evaluation methodology was employed to determine current competency levels of Fox Valley Technical College (FVTC) faculty who deliver contracted workforce training, and the development methodology was used in the design of an instrument to be administered to faculty as a form of self-assessment of competencies and modified to be administered to the college's contract training employer/client representatives as an evaluation tool.

Procedures

The purpose of this study was to evaluate the competency levels of faculty who deliver contracted workforce training against industry standards for instructors/trainers and to generate recommendations for faculty development at FVTC to address any performance gaps identified in the evaluation. The seven research questions posed in this project were addressed through literature review findings, analysis of faculty self-assessment survey responses and employer/client survey responses, comparison of survey responses to the established criteria (expected response means) through a gap analysis, and nominal group process to formulate recommendations for faculty development.

Instrumentation

To develop the evaluation instruments needed to conduct this study, the following development problem-solving procedures were conducted:

1. A comprehensive review of the literature was conducted. The review addressed the need for employer-contracted workforce training for incumbent workers, the ability of community colleges to respond to workplace training needs of employers, competencies of instructors/trainers as industry standards in the training of employees of business and industry, faculty development strategies in community colleges, and evaluation research.

2. A formative committee (Appendix A) was established to develop the evaluation criteria (competencies) and provide review and validation of the assessment instruments to be used in this project. This committee included FVTC's training and development coordinator, executive director of institutional advancement, dean of community and economic development, a faculty trainer, the dean of continuing education and development at Blackhawk Technical College, and the senior manager of human resources for one of FVTC's major business clients, Duralam, Inc. The formative committee was provided with the literature review enabling them to review the industry standards (competencies) for instructors/trainers that were identified in the literature and to determine which of these competencies were directly applicable to this study. The formative committee, through a combination of face-to-face meetings, phone, and e-mail communications, arrived at a consensus on the critical competencies (Appendix B) needed by instructors/trainers who conduct contracted workforce training for the purpose of this study.

3. Using the competencies for instructors/trainers as the criteria established in the second procedure by the formative committee, an assessment instrument (Appendix C) was developed to assess the current competency levels of FVTC faculty involved in workforce training and administered as a self-assessment. A second instrument (Appendix D) was developed as a modification of the faculty self-assessment instrument and was used as an evaluation instrument by the college's workforce training employers/clients (customer representatives).

The college's executive director of institutional advancement, the training and development coordinator, the faculty trainer, along with the researcher, served as the development subcommittee of the project's formative committee for the design of the questionnaires. This subcommittee began by reviewing five other questionnaires that had been developed and successfully used by the college or other organizations for similar purposes. The instruments reviewed included "Impressions of Fox Valley Technical College Communications" (FVTC, 1997), "Workforce Training Survey" (AACC, 1996), "Competency Assessment for Human Resource Development Practitioners" (ASTD, 1989), "Graduate Supervisor Survey" (FVTC, 1992), and "Adjunct Faculty Satisfaction Survey" (FVTC, 1995). The subcommittee, drawing on information from the literature, questionnaire criteria established in an earlier development project by the researcher (May, 1997a, pp. 49-51), and their professional expertise, established a set of criteria by which the questionnaires being developed would be evaluated. The criteria developed to evaluate the questionnaires were included as Appendix E.

The criteria for the questionnaires were validated in a two-step process: (a) to establish content validity, the questionnaire criteria were reviewed by the formative committee of the major applied research project; and (b) to establish face validity, the questionnaire criteria were reviewed by four college faculty (Appendix F) identified by the researcher who currently are assigned to provide contracted workforce training. Based upon the review and feedback from the validators, the development subcommittee of the project's formative committee finalized the questionnaire criteria and the researcher drafted the assessment instruments to address the established criteria. The cover letters for the faculty self-assessment instrument (Appendix G) and the employer evaluation instrument (Appendix H) were also drafted by the researcher. The draft questionnaires and cover letters were reviewed initially by the development subcommittee of the project's formative committee and modified based on their feedback.

An instrumentation summative committee (Appendix I) was appointed to validate the questionnaires by comparing the draft instruments to the established criteria through a written feedback mechanism (Appendix J). The instrumentation summative committee consisted of FVTC's evaluation specialist, assessment coordinator, executive dean of instructional support services, the institutional advancement manager from Blackhawk Technical College, and the evaluation coordinator from Waukesha County Technical College. The development subcommittee of the project's formative committee reviewed the feedback on the instruments and made adjustments which were determined to be appropriate modifications by the full formative committee.

The face validity of the modified draft of the faculty self-assessment instrument was achieved by piloting the questionnaire with five FVTC instructors/trainers who conduct workforce training who were identified by the dean of community and economic development. They were asked to complete the instrument and also provide feedback on any of the directions or items that they found to be unclear or ambiguous, as well as how long it took them to complete the questionnaire. The face validity of the modified draft of the employer/client evaluation instrument was achieved by piloting the questionnaire with five employers/clients of FVTC's contracted training services who were identified by the dean of community and economic development. They were asked to complete the instrument and also provide feedback on the questionnaire. The feedback form used in this step was included as Appendix K.

Based on the feedback from the instrumentation summative committee and the pilot testing of the instruments conducted in this procedure, the questionnaire drafts were revised as follows by the development subcommittee of the project's formative committee: (a) as opposed to a listing of 23 competency items organized in alphabetical order in the faculty instrument, the competencies were categorized under the subsections of "knowledge," "design," "delivery," and "group dynamics"; (b) the main header within the instruments was changed from "competency" to "types of knowledge and skill"; (c) a "don't know" option was added to the response scale; (d) wording changes were made to five of the 23 competency items to address issues of complexity and clarity; (e) two overall open-ended questionnaire items were added at the conclusion of the instruments which focused on the strongest area of competency and the competency needing the most improvement; and (f) based on unanimous feedback from the employer survey pilot regarding the issue of the employer respondents' inability to judge many of the competencies of instructors/trainers, 11 of the 23 competency items were eliminated from the employer instrument (maintaining only items to which employers would most likely be able to assess).

Research Questions and Related Procedures

The following sections each relate to one of the seven research questions addressed by this major applied research project. The specific procedures related to each question are described.

Need for Employer-Contracted Workforce Training

To answer the first research question, "How pervasive is the need for employer-contracted workforce training for incumbent workers?" a review of the literature was conducted to determine the extent to which workforce training is needed by business and industry. Central to this literature review was framing the issues of the economic viability of American industry, the changing nature of the workplace, and the extent to which workforce training plays a role in economic viability.

Community College Responsiveness in Workforce Training

The second question, "To what extent do community and technical colleges need to prepare to respond to the training and re-training needs of employers and the employed workforce?" was also addressed through the literature review. This review focused on the mission of community colleges relative to workforce training, employer expectations and resulting implications for these colleges, college responsiveness to workforce training needs, and community colleges' ability to compete in the workforce training arena. The review was expected to provide a context for the expectations of customers/employers and implications for faculty who conduct contracted workforce training.

Industry Standards for Instructors/Trainers

To answer the third question, "What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?" the following procedures were conducted as the basis for instrument development:

1. The review of literature was central to addressing this question. The literature review determined the critical competencies of instructors/trainers who conduct workforce training as identified in earlier studies and the work of a variety of authors. The review served as the primary resource for competency identification which constituted the evaluative criteria for this study.

2. The formative committee was provided with the literature review enabling them to consider the industry standards (competencies) for instructors/trainers that were identified in the literature and to determine which of these competencies were directly applicable to this study. The formative committee developed a consensus on the critical competencies needed by instructors/trainers who conduct contracted workforce training for the purpose of this study as well as to the specific wording of each competency.

The formative committee established the ideal mean competency levels on a five-point Likert-type scale for each of the criteria/competencies identified. These ideal means were established through a consensus decision-making process facilitated by a member of the formative committee, the faculty trainer.

Instructor/Trainer Self-Assessment of Competencies in Workforce Training

The fourth question, "How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?" was addressed through the implementation of the following procedures:

1. The faculty assessment instrument (Appendix C) was administered to all FVTC faculty who had conducted any contracted workforce training for business and industry clients during the 1997-98 academic year (total population of 150). Based on the size of this population, surveying the total population was both practical and would be most representative of the group being studied. The list of these faculty members was developed by the college's Economic Development Contract Services Office from the database of contracts maintained by this office. All contract records identify the faculty member who delivered the actual training. This office also distinguished between full-time and adjunct faculty in this listing. Faculty members surveyed included both full-time and adjunct faculty; these groups were segmented when the survey was conducted and identified through paper colors which distinguished the two faculty groups. The instrument was administered as a written survey and distributed through the college's interoffice mail system to full-time faculty (or done through the direct mail to households for any faculty off-contract when the survey was administered) and distributed through the direct mail to the households of adjunct faculty. Confidentiality of responses was ensured to the population being surveyed in the cover letter (Appendix G). A pen imprinted with the FVTC logo was enclosed to encourage response to the survey. Mailed surveys also included a postage-paid self-addressed return envelope.

2. The response rate on the faculty self-assessment survey was 66% (93% for full-time faculty and 41% for adjunct facuclty) with 99 out of 150 surveys returned. With a combined

response rate of less than 70% one week after the response date specified in the cover letter, a follow-up mailing was necessary. Complete anonymity was essential for the faculty population given that the survey's focus was on individual competency. To ensure this level of anonymity, the faculty surveys were not coded in any way. The population size was small enough to allow for a follow-up mailing to everyone initially surveyed; however, the follow-up mailing was administered only to the 78 adjunct faculty given the high rate of response from the full-time faculty. This mailing included a cover letter that again stressed the importance of the study and the respondent's contribution, another questionnaire, and a postage-paid self-addressed return envelope for those mailed off campus. An additional 16 responses were received from the follow-up mailing resulting in a 62% response rate (48 responses from the population of 78) from the adjunct faculty and an overall response rate for the total faculty group of 77% (115 responses from the population of 150).

3. Data from the faculty assessment were collected and the responses entered into Excel, a spreadsheet software package. This data entry and report generation, using Excel, was accomplished through FVTC's Research, Planning, and Development Department. The reports generated the necessary descriptive statistics including frequencies, means, and percentages of responses for each questionnaire item on the faculty survey. The data were segmented as follows: (a) by full-time faculty, (b) by adjunct faculty, and (c) by total faculty.

Employer/Client Evaluation of Instructor/Trainer Competencies

To address the fifth research question, "How do employer clients of FVTC's contracted workforce training programs rate the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?" the following procedures were employed:

1. The employer/client evaluation instrument (Appendix D) was administered to all FVTC contract training employers/clients for whom group size training (six or more participants) had been completed between October 1997 and March 1998. The Economic Development Contract Services Office established the list of this total group of employers. FVTC's economic development managers were called upon to identify the most appropriate personal contacts from each organization who were best positioned to respond to instructor/trainer competencies. The total population of 157 employers were surveyed as it was both practical and would be most representative of the college's employer/client base. The instrument was administered as a written, mailed survey. Confidentiality of responses was ensured in the cover letter (Appendix I) to the population being surveyed; however, all employer surveys were numbered with a numerical stamp on the return envelopes for follow-up with nonrespondents. A pen imprinted with the FVTC logo was enclosed to encourage response to the survey. A postage-paid self-addressed return envelope was also provided.

2. The response rate on the employer survey was 49% with 77 of the 157 surveys returned (less than the 70% required per procedure) one week after the response date specified in the cover letter, which required conducting a follow-up mailing with the 87 nonrespondents identified through the survey coding process. The follow-up mailing included a cover letter that again stressed the importance of the study and the respondent's contribution, another questionnaire, and a postage-paid self-addressed return envelope. The follow-up mailing produced an additional 26 responses, increasing the total response rate to 66% from the employer survey with 103 of the 157 employers responding.

3. Data from the employer survey were collected and the responses entered into the Excel spreadsheet software package. This data entry and report generation, using Excel, was

accomplished through FVTC's Research, Planning, and Development Department. The report generated the necessary descriptive statistics including frequencies, means, and percentages of responses for each questionnaire item on the employer survey.

Gap Analysis of Ideal Versus Actual Mean Ratings of Competencies

Research question six of the study, "Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?" was addressed by the following procedures:

1. A comparative analysis was done on each assessment item (each criterion) to determine what degree of difference, or gap, existed between the ideal mean ratings and the actual mean ratings or faculty competency levels for both the faculty and employer assessments. These data were presented in Tables 4 and 5 showing the ideal, faculty, and employer means and the pluses and minuses that were reflected between the means of each group and the ideal means.

2. To determine whether there were significant differences in the means of the full-time faculty, the adjunct faculty, and the employer responses, a one-way analysis of variance (ANOVA) was calculated using Excel and the results are provided in Chapter 4 of this report.

3. Using the comparative analysis of the data, the formative committee identified the performance gaps that needed to be addressed. This was done by identifying where the actual mean ratings of either the faculty or employer groups fell below the ideal mean ratings established.

Recommendations for Faculty Development

To answer the final question of the study, "What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?" the following procedures were used:

1. The formative committee, drawing on information from the literature review and their own expertise, generated recommendations for the development of FVTC faculty who deliver contracted workforce training, addressing the performance gaps and inservice training needs identified. The recommendations were developed using the nominal group technique facilitated by the researcher which allowed for idea generation and committee prioritization. This technique, as described by Rothwell and Kazanas (1994, pp. 102-103), was conducted as follows: (a) the formative committee was assembled; (b) participants generated recommendations for faculty development independently, recording the ideas one per slip of paper; (c) the facilitator collected all slips and recorded them as a list on a flipchart for all participants to see; (d) a group discussion was facilitated so that all participants clearly understood each recommendation; and (e) each participant was given six marker dots as votes to be applied in the prioritization of the recommendations (no more than three marker dot votes could be applied by a participant to any one recommendation). This process was intended to result in a reasonable number of prioritized recommendations for faculty development. Prior to adopting the final set of recommendations, the training and development coordinator and the researcher identified the estimated resources required and other logistical considerations for each proposed recommendation. Through consensus decision-making, the formative committee then finalized its recommendations.

2. The project summative committee (Appendix L), including key internal decision-makers and external professionals in human resource development and workforce training, reviewed the results of the evaluation and the related recommendations for faculty development at FVTC and provided feedback to the researcher on the validity and appropriateness of the

proposed recommendations. The summative committee feedback was attained through a direct mailing and captured in a written format included as Appendix M in this report.

3. The recommendations for faculty development were modified and finalized by the researcher based on the feedback from the summative committee. The internal summative committee members were called upon to approve the final recommendations for incorporation into the college's overall training and development plan and implementation.

Assumptions

For this major applied research project it was assumed that the review of literature was sufficiently comprehensive to serve as an appropriate information base for the study. The industry standards for competencies of instructors/trainers identified in the literature were assumed to be valid in today's work environment. It was assumed that the individuals who made up the formative and summative committees, as well as the development subcommittee of the project's formative committee, had the background, knowledge, and expertise to guide the development of the study and related instruments. It was assumed that the database information on the faculty instructors/trainers and the employer/clients was complete and accurate. It was also assumed that both the faculty and employer/client respondents to the surveys would provide completely honest assessments in their responses on competency levels. It was further assumed that the employer/client respondents were individuals who were in a position to assess adequately the competency levels of FVTC instructors/trainers. Finally, it was assumed that this study was valid within the context of Fox Valley Technical College and that it was a priority area of evaluation by the college.

Limitations

The product of this study was limited in that it was specific to the workforce training function needs of Fox Valley Technical College, therefore the results would not be generalizable to other populations. Although procedures were followed to establish content and face validity of the instruments for this study, extraneous variables may have posed a threat to the study's internal validity.

Chapter 4

RESULTS

The purpose of this major applied research project was twofold: (a) to evaluate the competency levels of FVTC faculty who deliver contracted workforce training to incumbent workers in business and industry against industry standards for trainers, and (b) to generate recommendations for faculty development at FVTC to address any performance gaps and inservice training needs identified through this evaluation. The seven research questions for the project, each addressed in a separate section that follows, were:

1. How pervasive is the need for employer-contracted workforce training for incumbent workers?

2. To what extent do community and technical colleges need to prepare to respond to the training and re-training needs of employers and the employed workforce?

3. What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?

4. How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?

5. How do the employer clients of FVTC's contracted workforce training programs rate the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?

6. Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?

7. What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?

Research Questions

Research Question One: Need for Employer-Contracted Workforce Training

The review of literature produced substantial evidence affirming the need and demand for workforce training in answer to the research question, "How pervasive is the need for employer-contracted workforce training for incumbent workers?" American companies are operating in a highly competitive economic environment and their employees' ability to develop new skills and abilities through education and training appear to be central to the competitive strength of organizations (American Association of Community Colleges, 1993, p. 3; Jacobs, 1992, p. 62; Jones, 1996, p. 21; National Alliance of Business, 1997b, p. 3; Price Waterhouse, 1994, p. E1; Robinson & Robinson, 1996, p. ix; Zeiss, 1997b, p. xiii). Workers need to be able to adapt to rapid changes in the workplace, broaden and diversify their skills and abilities, and function in high performance jobs (Hernandez-Gantes et al., 1995, p. 4; Jones, 1996, p. 21; Price Waterhouse, 1994, p. 18). Clearly, the competitive economic environment and employers' increasing expectations of workers are creating an enormous demand by corporate America for workforce training (Caudron, 1996, p. 32; Price Waterhouse, 1994, p. E1). American companies are spending billions of dollars each year as an investment in education and training of their employees (National Alliance of Business, 1997a, p. 3; Robinson & Robinson, 1996, p. ix) and any recent commission on the issue of the national economy has recommended the community colleges as key institutions in providing this training (Jacobs, 1992, p. 62; O'Banion, 1994, p. 14).

Research Question Two: Community College Responsiveness in Workforce Training

The literature review in this area provided a context for the expectations of employers as customers and implications for faculty who conduct contracted workforce training in response to the question, "To what extent do community and technical colleges need to prepare to respond to the training and re-training needs of employers and the employed workforce?" This review involved the mission of community colleges relative to workforce training, employer expectations and resulting implications for institutions, college responsiveness to workforce training needs, and community colleges' ability to compete in the workforce training arena.

The provision of workforce training holds challenging new customer expectations and service opportunities for community colleges, expectations not unlike those of any other business service providers (Eisen, 1997, pp. 20-22; Hough, 1994, pp. 6-7; Oregon Business Council, 1996, pp. 3-4; Shaw, 1997, p. 2). Implications for community colleges include positioning for responsiveness to changing customer needs (Carreon, 1996, p. 4), redefining the learning marketplace (Davis & Botkin, 1994, p. 16; Kantor, 1997, pp. 27-29), and implementing businesslike practices (Davis & Botkin, 1994, pp. 132-156; Gordon, 1995, p. 2; Kantor, 1997, p. 30; Seymour, 1992, p. 133). Most community colleges conduct some level of workforce training, are well positioned to be effective in this educational arena, and have come a long way in working with business. However, the literature also suggests that new levels of flexibility and responsiveness will need to be attained for these institutions to remain competitive in this marketplace (Bosworth, 1997, p. 12; Jacobs, 1995, p. 2; Kopischke, 1997, pp. 3-4; Stamps, 1995, p. 37).

Community college faculty are key to success in workforce training, whether regular faculty, adjunct faculty, or independent consultants (Kantor, 1994b, p. 10; O'Banion, 1994, pp. 15-16). These faculty must consider a number of unique factors in working with fully employed learners (Kantor, 1994b, pp. 7-9). To successfully compete, community colleges must assign their best faculty to the workforce training function (Gordon, 1995, p. 2), learn to adapt to more rapid, pervasive change (Zeiss, 1997a, p. 26), and deliver high quality, relevant training programs (Boone, 1997, pp. 10-11).

Research Question Three: Industry Standards for Instructors/Trainers

The review of literature was central in addressing the question, "What are the industry standards (competencies) for instructors/trainers of incumbent workers in business and industry?" The review served as the primary resource for competency identification which constituted the evaluative criteria for this study. A number of sources addressed the knowledge, skills, and attitudes expected of community college faculty and of instructors/trainers in business and industry (Bergman, 1996, p. 13; Israel, 1994, p. 95; Leach, 1996, p. 8; McLagan & Suhadolnik, 1989, pp. 39, 41-42, 48-49, 267-271; Mussnug & Lyons, 1994, pp. 21-23).

The literature review was provided to the formative committee, serving as a resource foundation for them to determine which competencies were directly applicable to this study. After reviewing the literature, the formative committee met, and by consensus, agreed upon 22 competencies of instructors/trainers in the delivery of contracted workforce training which constituted the basis for the study. These competencies were listed in Appendix B.

Once the competencies were finalized, and after the instruments were validated and pilot tested, the formative committee met once again to establish the ideal mean competency levels on the five-point Likert-type scale being used. The ideal means were established for each of the 22 competencies, as well as the overall item to be rated on the surveys. These ideal means were established through a consensus decision-making process which was facilitated by the faculty trainer member of the formative committee. The first step of this process involved discussion on the interpretation of mean ratings on a five-point Likert scale. With guidance from the executive director of institutional advancement, a member of the committee with an extensive background in institutional research, the committee adopted the following mean interpretation guideline: 4.5-5.0 = very high; 4.0-4.4 = high; 3.5-3.9 = moderately high; 3.0-3.4 = average/okay; 2.5-2.9 = low/action is definitely needed; < 2.5 = very low/major issues. The facilitator began by having the committee identify a few "anchor" competencies (those that were most appropriate as having the highest ideal means and those that were less critical and assigned ideal means on the lower end). All other competencies were addressed by having committee members individually assigning an ideal mean, each person sharing their ideal means with the group, and the group discussing each until consensus was achieved. The ideal means established for each of the competencies by the formative committee were included in Appendix B of this report.

Research Question Four: Instructor/Trainer Self-Assessment of Competencies

Several procedural steps were followed to address the fourth question, "How do FVTC's faculty who deliver contracted workforce training rate their competency levels (using industry standards for instructors/trainers) through self-assessment?" The faculty assessment instrument (Appendix C) was administered per established procedures to the total population of 150 faculty who conducted workforce training during the 1997-98 academic year. The response rate to the first mailing of the faculty survey was 66% with 99 of the 150 surveys returned. As subsets of this group, the full-time faculty responded at the rate of 93% (67 out of 72 surveys returned); the adjunct faculty produced a 41% response rate (32 out of 78 surveys returned). Per established procedures, since a 70% response rate was not achieved, a follow-up mailing was conducted with the total group of 78 adjunct faculty only. The follow-up mailing consisted of another copy of the assessment instrument, a postage-paid self-addressed return envelope and a follow-up cover letter included as Appendix N. The follow-up mailing produced an additional 16 responses, increasing the overall response rate from the total faculty group to 77% (a 93% response rate from the full-time faculty and 62% from the adjunct faculty). The specific numbers, distribution and response rates for the faculty survey are detailed in Table 1.

Data from the faculty assessment were collected and entered into an Excel spreadsheet. Three specific reports were generated from the spreadsheet--data from the full-time faculty survey, data from the adjunct faculty survey, and survey data for the total faculty group. The descriptive data from the faculty assessment are provided in detail in Table 2. Mean ratings from the full-time faculty range from a low of 3.62 to a high of 4.62; adjunct faculty mean ratings range from 3.25 to 4.58. Competencies identified as being the strongest, based on the mean ratings of faculty, included (a) self-knowledge, (b) subject matter understanding, (c) presentation skill, (d) observing skill, and (e) performance observation skill. Additionally, the full-time faculty rated their competency in adaptability/versatility at a high level. Competencies with the lowest faculty ratings in the self-assessment were (a) instructional technology application skill, (b) organizational culture assessment skill, (c) questioning skill, and (d) training theories and techniques understanding.

Faculty responses to the two open-ended survey items were summarized and included in Appendix O, categorized by full-time and adjunct faculty. The strongest competencies identified through the open-ended questions included (a) knowledge of the subject matter; and (b) ability to relate to and reach all types of employees as individuals--addressing their needs, making them feel comfortable and important, and making material understandable. Adaptability/versatility was also identified as a key strength by a number of full-time faculty. Competency in using

Table 1

Survey Number, Distribution, and Response Rates

	Population		Survey Respondents		
	N	%	n	%	Response Rate
Full-Time Faculty	72	48	67	58	93%
Adjunct Faculty	78	52	48	42	62%
Total Faculty	150	100	115	100	77%
Employers	157	100	103	100	66%

instructional technology clearly emerged as the area most needing improvement by both faculty groups. Other areas most cited as needing improvement included (a) identifying skills needed by employees, and (b) demonstrating ability to stay current with trends and technology in the industry.

Research Question Five: Employer/Client Evaluation of Instructor/Trainer Competencies

The fifth research question, "How do employer clients of FVTC's contracted workforce training programs rate the competency levels of the college faculty trainers (using industry standards for instructors/trainers)?" was also addressed through several procedures. The employer evaluation instrument was administered as a direct mail survey per the established

Table 2

Faculty Self-Assessment Data

	Full-Time Faculty		Adjunct Faculty		Total Faculty	
Competencies	n	Mean	n	Mean	n	Mean
Self-knowledge	67	4.62	48	4.58	115	4.60
Subject matter understanding	67	4.62	48	4.52	115	4.57
Presentation skill	66	4.49	47	4.23	113	4.38
Adaptability/versatility	66	4.52	48	4.06	114	4.33
Observing skill	66	4.37	47	4.21	113	4.31
Performance observation skill	62	4.34	46	4.24	108	4.29
Project management skill	66	4.28	48	4.21	114	4.25
Overall competency	67	4.33	48	4.15	115	4.25
Adult learning understanding	67	4.29	48	4.06	115	4.19
Analysis/synthesis skill	66	4.23	48	4.08	114	4.17
Coaching skill	66	4.20	48	4.10	114	4.15
Feedback skill	64	4.22	48	4.06	112	4.15
Relationship building skill	65	4.23	46	4.00	111	4.14
Skill identification	66	4.14	47	4.09	113	4.12
Writing skill	67	4.18	47	4.06	114	4.12
Information search skill	67	4.02	47	4.09	114	4.04

(table continues)

	Full-Time Faculty		Adjunct Faculty		Total Faculty	
Competencies	n	Mean	n	Mean	n	Mean
Objectives preparation skill	67	3.95	48	4.13	115	4.02
Group process skill	66	4.06	47	3.98	113	4.01
Model building skill	59	3.88	44	3.95	103	3.91
Training theories and techniques understanding	67	3.95	48	3.83	115	3.90
Questioning skill	63	3.97	46	3.67	109	3.83
Organizational culture assessment skill	61	3.62	40	3.50	101	3.56
Instructional technology application skill	67	3.65	44	3.25	111	3.50

Note. Mean ratings based on a five-point scale with five as the highest value (4.5-5.0 = very high; 4.0-4.4 = high; 3.5-3.9 = moderately high; 3.0-3.4 = average; 2.5-2.9 = low; <2.5 = very low).

procedures to the total population of 157 employers for whom group size training (six or more participants) had been completed between October 1997 and March 1998. The initial mailing to the employer group resulted in a response rate of 49% (77 out of the 157 surveys returned). Since this response rate was substantially lower than 70%, a follow-up mailing was conducted with the 87 nonrespondents as identified through survey coding. The follow-up mailing included another copy of the survey instrument, a postage-paid self-addressed return envelope, and a follow-up cover letter included as Appendix P. The follow-up mailing produced an additional 26 responses, increasing the total response rate to 66% from the employer survey with 103 of the 157 employers having returned the survey.

Data from the employer survey were collected and entered into an Excel spreadsheet. A report was generated from the spreadsheet on the employer data. The descriptive data from the employer survey are provided in detail in Table 3. Mean ratings from the employer group on the 12 competency areas they evaluated ranged from 4.05 to 4.60. The highest mean ratings by employers relate to the following competencies: (a) subject matter understanding, (b) training theories and techniques understanding, and (c) presentation skill. Employers' lowest mean ratings (although none below a mean of 4.00) involve the following competencies: (a) instructional technology application skill, and (b) organizational culture assessment skill. Seven employers who responded to the survey left all items blank, expressing an inability to evaluate these competencies. Additionally, a significant number of employers either did not respond or indicated "don't know" to the specific items on "organizational culture assessment skill" (with only 74 responding from the 103 returned surveys) and "instructional technology application skill"(with only 63 responding from the 103 returned surveys).

Employer responses to the two open-ended survey items were summarized and included in Appendix O. In terms of identifying the strongest areas of faculty competency, employers most often cited knowledge of the subject matter, followed by the ability of faculty to reach all types of students at their level and make material understandable, and workplace understanding. There

Table 3

Employer Evaluation Data

Competencies	Employer Responses	
	n	Mean
Subject matter understanding	95	4.60
Training theories and techniques understanding	91	4.44
Presentation skill	93	4.41
Overall competency	93	4.34
Group process skill	86	4.29
Project management skill	86	4.27
Skill identification	89	4.25
Objectives preparation skill	93	4.24
Relationship building skill	83	4.24
Adaptability/versatility	86	4.22
Organizational culture assessment skill	74	4.15
Instructional technology application skill	63	4.05

Note. Mean ratings based on a five-point scale with five as the highest value (4.5-5.0 = very high; 4.0-4.4 = high; 3.5-3.9 = moderately high; 3.0-3.4 = average; 2.5-2.9 = low; <2.5 = very low).

was little consistency or frequency in the employer responses to the open-ended item on identifying the instructor/trainer competency needing the most improvement.

Research Question Six: Gap Analysis of Ideal Versus Actual Mean Ratings of Competencies

Question six of the study was, "Do significant gaps exist between the ideal industry standard competency levels, the college faculty's self-assessment of their competency level, and the employer/client assessment of these competencies?" To address this question, first a comparative analysis was done on each item of the survey to determine what degree of difference, or gap, existed between the ideal means (established by the formative committee as described in Chapter 3) and the actual means of the response groups. Table 4 provided this data for the faculty self-assessment. Six competency gaps were identified in the full-time faculty ratings: organizational culture assessment skill (-.88), group process skill (-.44), training theories and techniques understanding (-.30), objectives preparation skill (-.30), instructional technology application skill (-.10), and questioning skill (-.03). Adjunct faculty ratings produced gaps in the following seven competencies: organizational culture assessment skill (-1.00), group process skill (-.52), instructional technology application skill (-.50), adaptability/versatility (-.44), training theories and techniques understanding (-.42), questioning skill (-.33), and objectives preparation skill (-.12).

The employer gap analysis data was detailed in Table 5 with the employer ratings showing gaps between ideal and actual ratings in four of the 12 competency areas to which they were asked to respond: organizational culture assessment skill (-.35), adaptability/versatility (-.28), group process skill (-.21), and objectives preparation skill (-.01). Overall, the largest performance gap was evidenced in "organizational culture assessment," which was consistent across all three respondent groups, and identified most significantly by the faculty.

Table 4

Gap Analysis of Faculty Self-Assessment Responses

		Full-Time Faculty		Adjunct Faculty		Total Faculty	
Competencies	Ideal Means	Mean	+/-	Mean	+/-	Mean	+/-
Self-knowledge	3.90	4.62	+.72	4.58	+.68	4.60	+.70
Presentation skill	3.75	4.49	+.74	4.23	+.48	4.38	+.63
Writing skill	3.50	4.18	+.68	4.06	+.56	4.12	+.62
Performance observation skill	3.80	4.34	+.54	4.24	+.44	4.29	+.49
Adult learning understanding	3.75	4.29	+.54	4.06	+.31	4.19	+.44
Project management skill	3.90	4.28	+.38	4.21	+.31	4.25	+.35
Coaching skill	3.80	4.20	+.40	4.10	+.30	4.15	+.35
Observing skill	4.00	4.37	+.37	4.21	+.21	4.31	+.31
Overall competency	4.00	4.33	+.33	4.15	+.15	4.25	+.25
Relationship building skill	3.90	4.23	+.33	4.00	+.10	4.14	+.24
Analysis/synthesis skill	4.00	4.23	+.23	4.08	+.08	4.17	+.17
Feedback skill	4.00	4.22	+.22	4.06	+.06	4.15	+.15
Information search skill	3.90	4.02	+.12	4.09	+.19	4.04	+.14
Skill identification	4.00	4.14	+.14	4.09	+.09	4.12	+.12
Model building skill	3.80	3.88	+.08	3.95	+.15	3.91	+.11
Subject matter understanding	4.50	4.62	+.12	4.52	+.02	4.57	+.07

(table continues)

		Full-Time Faculty		Adjunct Faculty		Total Faculty	
Competencies	Ideal Means	Mean	+/-	Mean	+/-	Mean	+/-
Adaptability/versatility	4.50	4.52	+.02	4.06	-.44	4.33	-.17
Questioning skill	4.00	3.97	-.03	3.67	-.33	3.83	-.17
Objectives preparation skill	4.25	3.95	-.30	4.13	-.12	4.02	-.20
Instructional technology application skill	3.75	3.65	-.10	3.25	-.50	3.50	-.25
Training theories and techniques understanding	4.25	3.95	-.30	3.83	-.42	3.90	-.35
Group process skill	4.50	4.06	-.44	3.98	-.52	4.01	-.49
Organizational culture assessment skill	4.50	3.62	-.88	3.50	-1.00	3.56	-.94

Note. Mean ratings based on a five-point scale with five as the highest value.

A one-way analysis of variance (ANOVA) was conducted to determine whether there was a significant difference between the means of the full-time faculty, adjunct faculty, and employer groups. This statistical analysis was done on the means of 12 competency items (see Table 6) which were the items common in the instruments of all three groups. The ANOVA test produced an F-value of 3.295575 and a critical value of F as 3.284924, with a P-value of 0.049558.

Table 5

Gap Analysis of Employer Responses

Competencies	Ideal Means	Employers Mean	Employers +/-
Presentation skill	3.75	4.41	+.66
Project management skill	3.90	4.27	+.37
Relationship building skill	3.90	4.24	+.34
Overall competency	4.00	4.34	+.34
Instructional technology application skill	3.75	4.05	+.30
Skill identification	4.00	4.25	+.25
Training theories and techniques understanding	4.25	4.44	+.19
Subject matter understanding	4.50	4.60	+.10
Objectives preparation skill	4.25	4.24	-.01
Group process skill	4.50	4.29	-.21
Adaptability/versatility	4.50	4.22	-.28
Organizational culture assessment skill	4.50	4.15	-.35

Note. Mean ratings based on a five-point scale with five as the highest value.

Because the P-value was ≤ .05, there is a statistically significant difference among the groups on the group of common competency items tested from Table 6 (the group means of 4.15, 4.00, and

Table 6

Perceived Levels of Competency on Twelve Common Items by Full-Time Faculty, Adjunct Faculty, and Employers

Competency Item	Full-Time Faculty Mean	Adjunct Faculty Mean	Employer Mean
1. Subject matter understanding	4.62	4.52	4.60
2. Training theories and techniques understanding	3.95	3.83	4.44
3. Organizational culture assessment skill	3.62	3.50	4.15
4. Skill identification	4.14	4.09	4.25
5. Objectives preparation skill	3.95	4.13	4.24
6. Project management skill	4.28	4.21	4.27
7. Presentation skill	4.49	4.23	4.41
8. Instructional technology application skill	3.65	3.25	4.05
9. Adaptability/versatility	4.52	4.06	4.22
10. Group process skill	4.06	3.98	4.29
11. Relationship building skill	4.23	4.00	4.24
12. Overall competency	4.33	4.15	4.34

(table continues)

Competency Item	Full-Time Faculty Mean	Adjunct Faculty Mean	Employer Mean
Group means (average)	4.15	4.00	4.29

Note. Mean ratings of level of competency based on a five-point scale with five as the highest value.

4.29 for the full-time faculty, adjunct faculty, and employers, respectively). In comparing these group means, the adjunct faculty group consistently produced the lowest mean ratings of the three groups (rating 11 of the 12 common competency items lower than the other two groups); "objectives preparation skill" was the only competency rated higher than the full-time faculty by the adjunct faculty respondents. The employer group produced the highest mean ratings of the three respondent groups on the majority (eight of the 12) common competency items. Clearly the greatest amount of variance was evidenced between the adjunct faculty and employer group means.

The formative committee identified the performance gaps that emerged from the comparative analysis of the survey data. Table 7 provides a summary of the areas and extent of the performance gaps (where the actual mean ratings fall below the ideal mean ratings established) for all three respondent groups. This data served as the basis for step one of the final procedure involving the development of recommendations to address the performance gaps evidenced in the study.

Research Question Seven: Recommendations for Faculty Development

The seventh and final research question, "What are the recommendations for the professional development of FVTC faculty involved in contracted workforce training to address any performance gaps and inservice training needs identified in this evaluation study to support their work with contract clients?," was addressed through the following procedural steps and accompanying results. Prior to being convened, the formative committee was provided with the data and results of the completed surveys. In a two-hour session facilitated by the researcher, the formative committee reviewed the survey results and used the nominal group technique to develop and prioritize recommendations for faculty development as outlined in the study's procedures. Independently, the formative committee members generated a total of 21 recommendations to address the gaps in competency levels identified in the study. As the group reviewed these collectively, it was determined that several were duplicates or similar enough to merge into a single recommendation. This review and synthesis produced a total of 14 recommendations.

The nominal group process technique of committee members "voting" individually for the recommendations they felt were most important resulted in a general prioritization of the group's recommendations. The recommendations, as developed by the formative committee, and their respective "votes" were presented in Appendix Q. Upon review of each recommendation by the training and development coordinator and the researcher in a follow-up work session, the recommendations were further merged to eliminate overlap from 14 to 12, and logistical and

Table 7

Gap Analysis Summary of Three Respondent Groups

Competencies	Full-Time Faculty Gap Value	Adjunct Faculty Gap Value	Employers Gap Value
Organizational culture assessment skill	-.88	-1.00	-.35
Group process skill	-.44	-.52	-.21
Training theories and techniques understanding	-.30	-.42	
Adaptability/versatility		-.44	-.28
Instructional technology application skill	-.10	-.50	
Objectives preparation skill	-.30	-.12	-.01
Questioning skill	-.03	-.33	

resource considerations were further detailed (see Appendix R). The detailed recommendations (Appendix R) were then presented to the formative committee for final review, feedback, and acceptance as the group's final recommendations. Consensus on the final recommendations was achieved through a combination of e-mail and phone communications.

The major applied research project's summative committee was called upon to provide feedback on the validity and appropriateness of the proposed recommendations for faculty development. This was done by providing the committee with the results of the evaluative surveys, the recommendations for faculty development established by the formative committee, a written feedback form (see Appendix M) for each committee member to complete and return to the researcher, and a cover letter from the researcher detailing what was being asked of each committee member.

The specific feedback from the five members of the project's summative committee on the validity and appropriateness of the recommendations for faculty development was provided in Appendix S. Based on this feedback, the researcher modified the recommendations as follows: (a) the intended emphasis on both adjunct and full-time faculty was made more clear in several of the recommendations; (b) the recommendations were further and more clearly prioritized by identifying the three core recommendations which would have the greatest impact and to be implemented immediately during the next academic year, the three recommendations that could be addressed in the on-going operations and procedures for workforce training, and four other recommendations that should be considered for future, longer range implementation by the college; (c) the wording in a few of the recommendations was changed to add clarity for readers who may not have a background in training and development; (d) recommendation four was merged with recommendation one; and (e) recommendation twelve was eliminated to address the issue of keeping an equal emphasis on both adjunct and full-time faculty and avoiding the assumption that one group had superior skills as compared to the other group. After making these modifications, the final recommendations for faculty development were developed by the researcher (see Appendix T) and approved for implementation by the internal summative committee members.

Summary

A review of current literature produced substantial evidence affirming the need and demand for employer-contracted workforce training to remain economically competitive. Community colleges are positioned to play a major role in the workforce training arena; however, employer demands for service, flexibility, responsiveness, and the delivery of high quality training programs will continue to increase.

The literature provided a resource foundation for the formative committee to identify competencies, or industry standards for instructors/trainers, of incumbent workers in business and industry which were directly applicable to this study. These competencies made up the core items of a questionnaire instrument developed for use in the evaluation. Ideal means for each competency item were established through a consensus decision-making process. These ideal means served as the evaluation criteria in the assessment of instructor/trainer competencies.

The questionnaire instrument was administered to FVTC's 150 full-time and adjunct faculty who conduct workforce training in the form of a self-assessment which, after two mailings, produced an over all response rate of 77% (115 responses from the 150 surveyed). The data collected from this survey identified both the strongest and the most limited areas of competency through the mean ratings for each item as well as the two open-ended items.

A questionnaire was also administered to 157 employers who were clients of the college in the provision of contracted workforce training during a recent time span. This survey, after two mailings, produced a response rate of 66% with 103 surveys returned. The data collected from this survey also identified both strengths and weaknesses in instructor/trainer competencies from the employer/client perspective and quantified through the mean ratings for each item, as well as through the two open-ended items.

By comparing the means of each respondent group (full-time faculty, adjunct faculty, and employers) to the ideal means established by the formative committee for each competency item, gaps were readily identified. Performance gaps existed in six competencies as identified through self-assessment by the full-time faculty, in seven competency areas by the adjunct faculty, and in four areas by the employers. Overall, the largest performance gap as evidenced consistently across all respondent groups was in the competency of "organizational culture assessment skill." The results of the one-way analysis of variance (ANOVA) statistical test showed that there was a significant difference among the respondent group means with a P-value of 0.049558 with the greatest variance occurring between the adjunct faculty and the employer group means.

Using the survey results and the performance gaps identified, the formative committee developed 14 recommendations for the professional development of faculty at FVTC through the nominal group process. This process also resulted in a general prioritization of these recommendations. The recommendations were further refined, detailed, and merged into 12 items prior to finalization by the formative committee, and review, feedback, and final refinement by the project's summative committee. Feedback from the summative committee resulted in further prioritization and refinement of the recommendations to a total of 10 faculty development initiatives in support of workforce training.

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

The purpose of this study was to evaluate the competency levels of Fox Valley Technical College faculty who deliver contracted workforce training, considering both the faculty and the customer (employer) perspectives and to generate recommendations for faculty development that would address any performance gaps identified through this evaluation. The need for this project was clear from the institutional perspective--the fact that instructor/trainer competencies had never been identified nor formally evaluated. The project was also in direct alignment with two of the college's organizational values--continuous improvement and customer focus. A broader need for this project was evidenced in the literature by the lack of evaluation and professional development models targeted to college faculty who conduct training in the private sector.

The literature review produced substantial evidence affirming the need and the demand for workforce training. The competitive economic environment and employers' increasing expectations of workers are creating an enormous demand by corporate America for workforce training (Caudron, 1996, p.32; Price Waterhouse, 1994, p. E1), causing American companies to spend billions of dollars each year as an investment in the education and training of their employees (National Alliance of Business, 1997a, p. 3; Robinson & Robinson, 1996, p. ix).

The literature also clearly identified the challenging customer expectations held by employers for community colleges as providers of workforce training, expectations not unlike those of any other business service providers (Eisen, 1997, pp. 20-22; Hough, 1994, pp. 6-7; Oregon Business Council, 1996, pp. 3-4; Shaw, 1997, p. 2). The importance of the instructor/trainer in the successful delivery of workforce training was quite evident in the literature, pointing to the need for performance criteria and evaluation of this role in the contract training function. Community college faculty are key to success in workforce training, whether regular faculty, adjunct faculty, or independent consultants (Kantor, 1994b, p. 10; O'Banion, 1994, pp. 15-16), and a college's best faculty must be assigned to this function to sustain success in this arena (Gordon, 1995, p. 2).

The literature search examined the industry standards or competencies of instructors/trainers who conduct workforce training for incumbent workers. The most prevalent and applicable work found in the literature was the competency study conducted by McLagan and Suhodolnik (1989) for the American Society of Training and Development. The literature review, coupled with the guidance and direction of the formative committee, established the competencies of the instructor/trainer as the criteria for this evaluation study (see Appendix B). To further define the evaluation criteria, each competency was assigned an ideal mean rating on a five-point Likert scale by the formative committee.

Using the established competencies as the basis for the study, two survey instruments were developed, validated, and piloted tested as a part of this major applied research project. One instrument was a faculty self-assessment questionnaire and the other was an employer evaluation questionnaire. The literature provided a significant amount of direction for the design and development of an evaluation study and implementation strategies including questionnaire development, sampling, cover letters for surveys, and achieving acceptable response rates (Isaac & Michael, 1990; May, 1997a; McMillan & Schumacher, 1993; Suskie, 1992).

The response rate to the faculty self-assessment survey administered to the total population of 150 faculty who had conducted workforce training during the 1997-98 academic year (with one follow-up) was 77%. The literature considered a 70% or greater response rate to be "very good" (Busche, 1995, p. 4; Ryan, 1993, p. 43; Suskie, 1992, p. 46). Mean ratings from the full-time faculty ranged from a low of 3.62 to a high of 4.62; adjunct means ranged slightly lower from 3.25 to 4.58. The lowest rated competency by the faculty was "instructional technology application skill" which was not surprising given the fact that the literature identified this as an emerging competency for instructors since the use of computers, distance learning, and other technology was expanding rapidly (Smith & Beno, 1995, p. 173) and that the majority (nearly 85%) of training provided to business and industry by community colleges used traditional methods such as lecture, discussion, and hands-on training, rather than emerging instructional technologies (Doucette, 1993, p. 7). The second lowest rated competency by the faculty response group was "organizational culture assessment skill," a rather unique aspect of a typical faculty member's role.

The response rate to the employer survey, administered to the total population of 157 employers for whom group size training (six or more participants) had been completed by FVTC between October 1997 and March 1998 (with one follow-up), was 66%. This response rate, in the range of 60-69%, was cited in the literature as being "good" (Busche, 1995, p. 4; Ryan, 1993, p. 43; Suskie, 1992, p. 46). Mean ratings from the employer group on the 12 competency areas they evaluated were very high and ranged from 4.05 to 4.60. Overall, the customers (employers) rated the competency levels of the FVTC faculty somewhat higher than they assessed their own performance levels. The employers' two lowest rated competencies were the same items identified by the faculty--"instructional technology application skill," and "organizational culture assessment skill," although no employer means fell below 4.00. Many employers also had difficulty responding to and rating these two particular competency areas.

A comparative analysis was done on each survey item to determine what degree of difference, or gap, existed between the ideal means and the actual means of the response groups. Gaps were identified in six competency areas by the full-time faculty, in seven competencies by the adjunct faculty, and in four areas by the employers. The largest overall performance gap was evidenced in "organizational culture assessment," which was consistent across all three respondent groups, and identified most significantly by the faculty. There was great consistency among the groups in identifying where the gaps were, with at least two of the three respondent groups showing some degree of concurrence for any competency showing a gap. The one-way analysis of variance (ANOVA), conducted to determine whether there was a significant difference between the group means on the competency items that were common to the survey instruments for all three groups, produced a P-value of 0.049558 which indicated that there was a significant difference among the groups. The greatest variance clearly existed between the group means of the adjunct faculty and the employers. The adjunct faculty consistently rated their level of competency in these instructor/trainer knowledge and skill areas lower than the other two respondent groups. This was not a surprising result given the fact that fulfilling the role as an instructor/trainer on an adjunct basis often has no direct relationship to the primary professional role/responsibilities of these individuals.

What was surprising, however, was that the employer group as clients of FVTC, produced mean ratings as their perceived levels of faculty competency which were higher than either of the faculty group self-assessment mean ratings in eight of the 12 common competency items. Employers may have had some difficulty in assessing the extent to which the instructor/trainer competencies were being fulfilled without a certain amount of direct observation or employers may have compared these competencies with their own internal abilities to deliver training and viewed those associated with an educational provider more positively. The faculty may also have also been more critical in their own individual self-assessment than were the employers who were rating competency levels of faculty in general.

The formative committee, using the nominal group technique, developed and prioritized 14 recommendations for faculty development to address the performance gaps identified through the survey data. These recommendations were further refined, detailed, and synthesized to a total of 12 recommendations. The summative committee provided feedback on the validity and appropriateness of the proposed recommendations for faculty development as the final review step of the project. The recommendations reflected several key points made in the literature regarding faculty development, including strategies for working in partnership and across various units of the college to support and train faculty (Kantor, 1994b, p. 9) and involving faculty peers in the development and sharing of innovations and enhancements in teaching and learning (Travis, 1995, p. 35). The literature further called for professional development efforts to be grounded in a comprehensive and accurate assessment of employee needs (McHargue, 1996, p. 3; Rothwell & Kazanas, 1994, pp. 81, 83, 99). This evaluation and corresponding plan for faculty development, conducted and developed within this major applied research project, exhibited this type of grounding. Improving the quality of teaching and learning through faculty development was viewed by several authors as being central to a college's success (Angelo, 1994, pp. 115-116, 118; Falcone, 1994, p. 6; Freed et al., 1997, pp. 83-84; Grubb et al., 1997, p. 47; Kantor, 1994b, p. 10).

Conclusions

The need for employer-sponsored workforce training would appear to be very strong with the demand for training provided by community colleges very likely to increase as the expectations of workers also continues to increase. Employer expectations for both service and quality by training providers are also anticipated to escalate over time causing colleges to continually reassess their performance in fulfilling this aspect of their educational mission. Skilled and effective instructors/trainers are central to a college's ability to deliver high quality training programs which meet the needs of employers and employees.

Core competencies of instructors/trainers who conduct workforce training and the ideal level of performance for each competency could be established for Fox Valley Technical College through a consensus decision-making process. These competencies were based on the literature and the expertise of individuals from inside and outside the institution, providing a variety of professional perspectives.

There were very few major performance gaps in instructor/trainer competencies identified in the study. The most significant gap areas were evident in the survey results from all three respondent groups. The performance gaps in seven of the 23 total competencies and the extent to which gaps existed were very clearly identified in the results of the study. Overall, the means from all response groups were quite high. There was some evidence that employers were not able to judge certain instructor/trainer competencies or respond to the survey items in general.

The adjunct faculty represented a group of staff with a significant impact on Fox Valley Technical College's overall performance in workforce training given the fact that 52% of the faculty involved in the delivery of workforce training were adjunct faculty in the 1997-98 academic year. The study results clearly showed this respondent group having the largest number of competency gaps, as well as generally the largest gap values, indicating the greatest need for competency development.

Finally, it could be concluded that the recommendations for faculty development addressed the performance gaps identified in the evaluation and were appropriate within the context of Fox Valley Technical College. The 10 final recommendations were also proposed in an appropriate priority order for implementation.

Implications

The results of this study would indicate strong implications for community colleges in continuing to position themselves to effectively provide contracted workforce training to meet the educational needs of incumbent workers. These institutions, including Fox Valley Technical College, will need to continuously improve their responsiveness to employers, overall customer service, and the quality of training provided to remain a viable and competitive service provider in this market.

The systematic approach used in this study to develop and evaluate the competencies of instructors/trainers in workforce training would suggest that the results be utilized by Fox Valley Technical College leaders to specifically focus on the seven performance gaps identified. While it was clear from the study which competency areas needed improvement, the very favorable ratings by respondents to most items of this study would indicate strong implications for the continuation of current college practices in the delivery of workforce training. The fact that a number of employers appeared to be too far removed from the actual training activities and expressed an inability to judge instructor/trainer competency had implications for the methods and sources used in attaining subsequent and on-going customer feedback from employers.

The professional development plan and related activities in the area of workforce training undertaken by Fox Valley Technical College will need to include and support the institution's adjunct faculty, the respondent group within the study which clearly showed the greatest number of competency gaps, as well as many of the largest gap values. This need was also made clear by the fact that the adjunct faculty represented 52% of the population of faculty involved in the delivery of the college's workforce training, a group with significant impact on this service delivery function.

Finally, using the results of this study and implementing the recommendations for faculty development would provide Fox Valley Technical College, not only with the advantage of focusing its professional development resources on identified performance gaps but with the opportunity to potentially close those gaps. Acceptance and implementation of the recommendations would constitute a commitment by the college in assisting its faculty in achieving higher skill levels as instructors/trainers, thus improving the college's performance in contracted workforce training. The challenge of heightened expectations of worker performance and skill levels in the private sector is the same challenge facing colleges as employers and their own workers--in this case, their faculty.

Recommendations

Recommendations for Implementation

It was recommended that the evaluation data from this study be used to make modifications and improvements in FVTC's responsiveness, customer service, and workforce training quality. Seven performance gaps were identified in the study and corresponding recommendations for faculty development were developed to address those gaps, focusing on both the full-time and adjunct faculty. It was further recommended that the plan for faculty development be fully implemented with the college administration's commitment of necessary resources and support.

Recommendations for Dissemination

It was recommended that a summary of the results of this study be disseminated to the FVTC faculty who conduct workforce training and the economic development managers who serve as primary contacts with business and industry. This summary will be shared in a written format by the researcher in October, 1998. It was also recommended that the results of the study and the corresponding recommendations for faculty development be shared and discussed with the instructional deans of the college by the researcher at their regular meeting in October, 1998.

Further, it was recommended that the literature review, evaluation methodology and procedures, as well as the questionnaire instruments, be shared by the researcher with workforce training administrators from each of the 16 colleges of the Wisconsin Technical College System. A personal presentation would be appropriate for this group's fall or winter state meeting during the 1998-99 academic year.

Finally, it was recommended that this study be shared with the professional community through proposals for presentations at state, national, and international conferences related to workforce training or human resource development. It was further recommended that this competency evaluation model be disseminated through articles in journals, newsletters, or magazines related to workforce training and community colleges. This work would also be shared with the professional community through ERIC as an abstract and made available in its entirety upon request through UMI Dissertation Services.

Recommendations for Further Research

A follow-up study should be considered by the college which will focus specifically on the seven competencies that showed some degree of performance gap in this study once the faculty development strategies have been implemented. The purpose of implementing this follow-up study would be to determine if progress has been made in addressing these performance gaps.

It was recommended that continued research was needed to further refine and constantly update the set of instructor/trainer competencies important to the employers in the college's service delivery area. This input should be broadened to include both the employer and employee (training participant) perspectives as there are really two customers involved in contracted training.

It was further recommended that competencies for other core job functions of the college be developed and systematically evaluated from time to time to serve as a foundation for the institution's staff development initiatives. On-going follow-up evaluation of the impact of staff development efforts should also be encouraged to determine if expected results are being achieved.

For community colleges to excel in the workforce training arena providing high quality educational services to business and industry, additional research needs to be conducted (perhaps at a national level) to develop and validate competencies of instructors/trainers who facilitate the learning of incumbent workers. Further research was also recommended for the development of models for the design and delivery of faculty development, especially faculty who, as an extension of their traditional role, conduct workforce training in the private sector.

Finally, further research should be conducted to determine the extent to which community colleges provide an appropriate level of support services, including faculty development, to faculty who provide workforce training. This research could potentially identify the most common areas of institutional support and identify best practices in this area. Such research would assist community colleges in evaluating their own level of support for the workforce training function and the individuals who are called upon to respond to the needs of employers, exhibit high levels of customer service, and provide relevant, high quality training which addresses a wide variety of performance issues in client organizations.

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APPENDIXES

Appendix A

Formative Committee

Members of the formative committee were selected based on their responsibilities in the organization and their experience in various aspects of workforce training and professional development. The following individuals served as the formative committee for this major applied research project:

Carol Bartelt
Training and Development Coordinator
Fox Valley Technical College
Appleton, Wisconsin

Beverly Hilscher
Dean, Community and Economic Development
Fox Valley Technical College
Appleton, Wisconsin

Carol Tyler
Faculty Trainer/Consultant
Quality Academy
Fox Valley Technical College
Appleton, Wisconsin

Richard Kendall
Senior Manager of Human Resources
Duralam, Inc.
Appleton, Wisconsin

Carol Mishler
Executive Director, Institutional Advancement
Fox Valley Technical College
Appleton, Wisconsin

Jane Svennevig
Dean, Continuing Education and Development
Blackhawk Technical College
Janesville, Wisconsin

Appendix B

Instructor/Trainer Competencies

The following competencies of instructors/trainers in the delivery of contracted workforce training were agreed upon by the formative committee as the basis for this study. The ideal mean ratings established by the formative committee are shown in parentheses after each competency.

Adaptability/Versatility: Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations (4.50)

Adult Learning Understanding: Knowing how adults acquire and use knowledge, skills, and attitudes; understanding individual differences in learning (3.75)

Analysis/Synthesis Skill: Using data, information, and observation to make decisions and develop teaching-learning strategies (4.00)

Coaching Skill: Helping individuals recognize and understand personal needs, values, problems, alternatives, and goals (3.80)

Feedback Skill: Communicating information, opinions, observations, and conclusions such that they are understood and can be acted upon (4.00)

Group Process Skill: Influencing groups so that tasks, relationships, and individual needs are addressed (4.50)

Information Search Skill: Gathering information from printed and other recorded sources; identifying and using information specialists and references (3.90)

Instructional Technology Application Skill: Incorporating technology in instructional delivery and student learning applications (e.g. use of the Internet, e-mail, word processing, and presentation software) (3.75)

Model Building Skill: Developing practical frameworks that describe complex ideas (3.80)

Objectives Preparation Skill: Preparing clear statements that describe desired training results (4.25)

Observing Skill: Objectively recognizing what is happening in or across situations (4.00)

Organizational Culture Assessment Skill: Ability to assess an organization's political, economic, and social systems; using this larger perspective as a framework for influencing events and change (4.50)

Performance Observation Skill: Assessing student/participant performance (3.80)

Presentation Skill: Presenting information in a variety of ways to achieve instructional purposes (3.75)

Project Management Skill: Planning, organizing, and monitoring work (3.90)

Questioning Skill: Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods (4.00)

Relationship Building Skill: Establishing relationships and networks across a broad range of people and groups (3.90)

Self-Knowledge: Knowing one's personal values, needs, interests, style, and competencies; applying a sense of what is appropriate and what is not in the teaching-learning environment (3.90)

Skill Identification: Identifying the knowledge and skill requirements of employees (4.00)

Subject Matter Understanding: Knowing the content of a given function or discipline being addressed (4.50)

Training Theories and Techniques Understanding: Knowing the theories and methods used in training; understanding their appropriate uses (4.25)

Writing Skill: Preparing written material that follows generally accepted rules of style and form, is appropriate for the audience, creative, and accomplishes its intended purpose (3.50)

An item on overall competency was also used in this survey; the ideal mean rating on this item was established as 4.00 by the formative committee.

Appendix C

Faculty Self-Assessment Instrument

Competencies of the Instructor/Trainer in the Delivery of Workforce Training for Business and Industry

Please rate your level of expertise in the following competency areas. As a form of self-assessment, circle the number for each competency item that most accurately reflects your current level of competence (knowledge and skill) as an instructor/trainer in business and industry workforce training (1=low; 5=high).

	Types of Knowledge and Skill	Current Level of Competence					
		Low 1	2	Medium 3	4	High 5	Don't Know
Knowledge	1. **Self-Knowledge:** Knowing one's personal values, needs, interests, style, and competencies; applying a sense of what is appropriate and what is not in the teaching-learning environment	1	2	3	4	5	☐
	2. **Adult Learning Understanding:** Knowing how adults acquire and use knowledge, skills, and attitudes; understanding individual differences in learning	1	2	3	4	5	☐
	3. **Subject Matter Understanding:** Knowing the content of a given function or discipline being addressed	1	2	3	4	5	☐
	4. **Training Theories and Techniques Understanding:** Knowing the theories and methods used in training; understanding their appropriate uses	1	2	3	4	5	☐
Design	5. **Organizational Culture Assessment Skill:** Ability to assess an organization's political, economic, and social systems; using this larger perspective as a framework for influencing events and change	1	2	3	4	5	☐
	6. **Skill Identification:** Identifying the knowledge and skill requirements of employees	1	2	3	4	5	☐
	7. **Information Search Skill:** Gathering information from printed and other sources; identifying and using information specialists and references	1	2	3	4	5	☐
	8. **Analysis/Synthesis Skill:** Using data, information, and observation to make decisions and develop teaching-learning strategies	1	2	3	4	5	☐
	9. **Objectives Preparation Skill:** Preparing clear statements that describe desired training results	1	2	3	4	5	☐
	10. **Model Building Skill:** Developing practical frameworks that describe complex ideas	1	2	3	4	5	☐
	11. **Writing Skill:** Preparing written material that follows generally accepted rules of style and form, is appropriate for the audience, creative, and accomplishes its intended purpose	1	2	3	4	5	☐

OVER . . .

	Types of Knowledge and Skill	Current Level of Competence					
		Low 1	2	Medium 3	4	High 5	Don't Know
Delivery	12. **Project Management Skill:** Planning, organizing, and monitoring work	1	2	3	4	5	☐
	13. **Observing Skill:** Objectively recognizing what is happening in or across situations	1	2	3	4	5	☐
	14. **Presentation Skill:** Presenting information in a variety of ways to achieve instructional purposes	1	2	3	4	5	☐
	15. **Performance Observation Skill:** Assessing student/participant performance	1	2	3	4	5	☐
	16. **Instructional Technology Application Skill:** Incorporating technology in instructional delivery and student learning applications (e.g. use of the Internet, e-mail, word processing, and presentation software)	1	2	3	4	5	☐
	17. **Adaptability/Versatility:** Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations	1	2	3	4	5	☐
Group Dynamics	18. **Coaching Skill:** Helping individuals recognize and understand personal needs, values, problems, alternatives, and goals	1	2	3	4	5	☐
	19. **Feedback Skill:** Communicating information, opinions, observations, and conclusions such that they are understood and can be acted upon	1	2	3	4	5	☐
	20. **Group Process Skill:** Influencing groups so that tasks, relationships, and individual needs are addressed	1	2	3	4	5	☐
	21. **Questioning Skill:** Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods	1	2	3	4	5	☐
	22. **Relationship Building Skill:** Establishing relationships and networks across a broad range of people and groups	1	2	3	4	5	☐
	23. **Overall Competency:** An overall assessment of your level of knowledge and skill in the delivery of workforce training for business and industry	1	2	3	4	5	☐

24. What do you feel is your **strongest competency** as an instructor/trainer in business and industry?

25. Which of your competencies do you believe **needs the most improvement**?

Appendix D

Employer/Client Evaluation Instrument

Competencies of Instructors/Trainers in the Delivery of Workforce Training for Business and Industry

Please rate the level of expertise that you believe Fox Valley Technical College instructors/trainers have in the following competency areas. Circle the number for each competency item that most accurately reflects their current level of competence (knowledge and skill) as instructors/trainers in business and industry workforce training (1=low; 5=high).

Types of Knowledge and Skill	Current Level of Competence					
	Low		Medium		High	Don't Know
	1	2	3	4	5	
1. **Subject Matter Understanding:** Knowing the content of a given function or discipline being addressed	1	2	3	4	5	☐
2. **Training Theories and Techniques Understanding:** Knowing the theories and methods used in training; understanding their appropriate uses	1	2	3	4	5	☐
3. **Organizational Culture Assessment Skill:** Ability to assess an organization's political, economic, and social systems; using this larger perspective as a framework for influencing events and change	1	2	3	4	5	☐
4. **Skill Identification:** Identifying the knowledge and skill requirements of employees	1	2	3	4	5	☐
5. **Objectives Preparation Skill:** Preparing clear statements that describe desired training results	1	2	3	4	5	☐
6. **Project Management Skill:** Planning, organizing, and monitoring work	1	2	3	4	5	☐
7. **Presentation Skill:** Presenting information in a variety of ways to achieve instructional purposes	1	2	3	4	5	☐
8. **Instructional Technology Application Skill:** Incorporating technology in instructional delivery and student learning applications (e.g. use of the Internet, e-mail, word processing, and presentation software)	1	2	3	4	5	☐
9. **Adaptability/Versatility:** Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations	1	2	3	4	5	☐
10. **Group Process Skill:** Influencing groups so that tasks, relationships, and individual needs are addressed	1	2	3	4	5	☐
11. **Relationship Building Skill:** Establishing relationships and networks across a broad range of people and groups	1	2	3	4	5	☐
12. **Overall Competency:** An overall assessment of their level of knowledge and skill in the delivery of workforce training for business and industry	1	2	3	4	5	☐

OVER . . .

13. What is the **strongest competency** of Fox Valley Technical College instructors/trainers?

14. What is the competency of our instructors/trainers **most needing improvement**?

Appendix E

Criteria for Questionnaire Evaluation

The following criteria were established to be used in the development and evaluation (validation) of the questionnaire instruments:

Construct Criteria

- Clearly worded instructions
- Clearly worded items that address only one element per item
- Questions kept as short as possible
- Vocabulary appropriate to the respondent group
- Format that is easy to respond to
- Format is uncluttered and incorporates economy of space
- Maximum length of two pages
- Items on demographics, if included, placed at the end of the questionnaire
- Each item allows for a range of response options
- Response scale is clearly labeled
- Incorporates few, if any, open-ended items
- Related items are grouped together
- Respondents are given a guarantee of confidentiality
- Cover letter and/or questionnaire clearly indicate the purpose of the survey

Content Criteria

- Asks for an assessment of the instructor/trainer competencies in workforce training as identified by the project's formative committee

- Content is limited to competencies of instructors/trainers in workforce training
- Contains at least one item soliciting the respondent's overall impression of competency level
- Contains demographic items if necessary

Appendix F

List of Questionnaire Validators

The following individuals served as validators of the questionnaire's face validity in addressing the questionnaire development criteria:

Callie Zilinsky
Instructor/Trainer
Quality Academy
Fox Valley Technical College
Appleton, Wisconsin

Robert Day
Instructor/Trainer
Computer Applications
Fox Valley Technical College
Oshkosh, Wisconsin

Craig Black
Instructor/Trainer
AutoCAD Training Center
Fox Valley Technical College
Appleton, Wisconsin

Terry Linson
Instructor/Trainer
Fire Training Center
Fox Valley Technical College
Neenah, Wisconsin

Appendix G

Cover Letter for Faculty Self-Assessment Instrument

Dear _____________:

Fox Valley Technical College continues to maintain a very strong reputation with employers in its delivery of workforce training as a contracted service. This positive reputation is primarily the result of the outstanding work that you, as an instructor/trainer, have done and continue to do. As the need of employers for upgrade training of their workers continues to grow, I want to make sure that we, as a college, are doing the best job possible in supporting you and your work in conducting business/industry training.

Because of my strong interest and commitment to our success in economic development (business and industry training) as a key purpose of the college, I have made this area the focus of my doctoral dissertation project. The project involves a study of the competencies of instructor/trainers who conduct workforce training in business/industry.

I am attempting to assess these competencies from two perspectives: a) from a self-assessment by faculty who conduct training in business/industry and b) from a general assessment by our employers/clients. With the results of this study, I hope to determine what, if any, needs exist for faculty development related to workforce training and what opportunities and resources the college should be providing for faculty.

Enclosed is the brief self-assessment questionnaire that I ask you to complete regarding your role as instructor/trainer in business and industry training. Please accept my personal assurance of complete confidentiality in your response; nothing is being done to identify you as an individual, your division, or department in this survey. As you know, with any survey, a certain response rate needs to be achieved to attain valid results, so your response is critical to the success of this study. I would greatly appreciate it if you would take 10 minutes of time to complete this self-assessment and return it via interoffice mail in the enclosed envelope **by (date)**.

Thanks for your work in the economic development arena and participating in this project. It is my hope that the results of the effort will be of great benefit to current and future instructors who conduct workforce training.

Sincerely,

Susan A. May
Vice President, Instructional Services

Enclosure

Appendix H

Cover Letter for Employer/Client Evaluation Instrument

Dear _____________:

Fox Valley Technical College maintains a very strong commitment to area employers in providing workforce training services. To help you upgrade your workers, we want to make sure that our faculty have the highest level of knowledge and skill possible to deliver high caliber training and technical assistance.

The enclosed short survey focuses on the competencies (knowledge and skills) of Fox Valley Technical College instructors/trainers who conduct workforce training. We need you to evaluate our faculty's performance in these competency areas based on your personal observation of training, your interaction with faculty in the planning and coordination of training, employee participant feedback, and/or any follow-up interaction you have had with the trainer(s). This evaluation is not intended to focus on any one specific instructor/trainer, rather our staff who have delivered training to your organization in total.

From the results of this survey, we hope to determine both strengths and areas where potential gaps in faculty knowledge and skills exist. As a continuous improvement measure, we need to address our own staff development for faculty who conduct workforce training.

As you know, with any survey, a certain response rate needs to be achieved to attain valid results, so your response is critical to the success of this study. I would greatly appreciate it if you would take 10 minutes of time to complete this evaluation and return it in the enclosed postage-paid envelope **by (date)**. Your individual response to this survey will be kept completely confidential.

Thank you very much for giving the college your feedback. It is only through this type of evaluation that we can continue to improve our performance for you and other employers as valued clients interested in workforce development.

Sincerely,

Susan A. May
Vice President, Instructional Services

Enclosure

Appendix I

Instrumentation Summative Committee

The following individuals served as the instrumentation summative committee members based on their positions and expertise, providing review and feedback in the development of the questionnaire instruments:

Janet Perry
Evaluation Specialist
Fox Valley Technical College
Appleton, Wisconsin

Terri Langan
Assessment Coordinator
Fox Valley Technical College
Appleton, Wisconsin

Lori Weyers
Executive Dean, Instructional
Support Services
Fox Valley Technical College
Appleton, Wisconsin

Kaylen Betzig
Manager, Institutional Advancement
Blackhawk Technical College
Janesville, Wisconsin

Kathy Yindra
Evaluation Coordinator
Waukesha County Technical College
Waukesha, Wisconsin

Appendix J

Feedback Document on Questionnaire

Questionnaire on Faculty Competencies in Conducting Workforce Training
INSTRUMENT VALIDATION

Please review the enclosed drafts of Fox Valley Technical College's questionnaires to be used in evaluating/assessing competency levels of instructors/trainers who conduct workforce training. The instrument will be administered as a self-assessment to the faculty (Document #1 with cover letter) as well as administered as an employer survey with clients of FVTC's contracted workforce training (Document #2 with cover letter). Determine whether or not the following criteria have been met.

Construct Criteria	Sufficiently Meets Criteria? (check one)		Comments/Suggestions
• Clearly worded instructions	Yes	No	
• Clearly worded items that address only one element per item	Yes	No	
• Questions kept as short as possible	Yes	No	
• Vocabulary appropriate to the respondent group	Yes	No	
• Format that is easy to respond to	Yes	No	
• Format is uncluttered and incorporates economy of space	Yes	No	
• Maximum length of two pages	Yes	No	
• Items on demographics, if included, placed at the end of the questionnaire	Yes	No	
• Each item allows for a range of response options	Yes	No	
• Response scale is clearly labeled	Yes	No	
• Incorporates few, if any, open-ended items	Yes	No	
• Related items are grouped together	Yes	No	
• Respondents are given a guarantee of confidentiality	Yes	No	
• Cover letter and/or questionnaire clearly indicate the purpose of the survey	Yes	No	

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Content Criteria	Sufficiently Meets Criteria? (check one)	Comments/Suggestions
• Asks for an assessment of the instructor/trainer competencies in workforce training as identified by the project's formative committee (Document #3 enclosed)	Yes No	
• Content is limited to competencies of instructors/trainers in workforce training	Yes No	
• Contains at least one item soliciting the respondent's overall impression of competency level	Yes No	
• Contains demographic items if necessary	Yes No	

Additional Comments/Suggestions:

Evaluator: ______________________________ **Date:** ________________

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Appendix K

Feedback Form for Questionnaire Pilots

SURVEY FEEDBACK QUESTIONS

- Was the survey easy to complete? ______________________________
- How long did it take to complete? ______________________________
- Were the directions clear? ______________________________
- Were any of the items unclear? If so, which ones? ______________________________

  ____

  ____
- Was the response scale easy to use? ______________________________
- Do you have any suggestions for improving this survey form? ______________

  ____

  ____

Name: ______________________________

Thank you!

Appendix L

Summative Committee

Members of the summative committee were selected based on their leadership positions in or related to the organization and their expertise in various aspects of workforce training or professional faculty development. The following individuals served as the summative committee for this major applied research project:

H. Victor Baldi, Ph.D.
President
Fox Valley Technical College
Appleton, Wisconsin

Don Carlson
Vice President, Human Resources
Oshkosh B'Gosh
Oshkosh, Wisconsin
Trustee, FVTC Board

Jerald Schoenike, Ph.D.
Educational Consultant
Clintonville, Wisconsin
Former Trustee, FVTC Board

Tim Andre
Director, Human Resource Services
Fox Valley Technical College
Appleton, Wisconsin

Barbara Bermel
Business Analyst/Trainer
Menasha Corporation
Neenah, Wisconsin
Trustee, FVTC Board

Appendix M

Project Summative Committee Feedback Form

Validation of Recommendations for Faculty Development *(Instructors/Trainers Who Deliver Contracted Workforce Training)*
Do the recommendations for faculty development adequately address the instructor/trainer competency performance gaps identified in the evaluation study? ☐ Yes ☐ No (if no, provide specific feedback here) Suggestions:
Are the number of recommendations reasonable? ☐ Too few ☐ Too many ☐ About right Suggestions:
Are all recommendations appropriate within the context of Fox Valley Technical College's workforce training initiatives? ☐ Yes ☐ No (if no, provide specific feedback here) Suggestions:
Can you support the overall prioritization of these recommendations in terms of importance and consideration for implementation? ☐ Yes ☐ No (if no, provide specific feedback here) Suggestions:

Evaluator: ______________________ **Date:** ______________

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Appendix N

Follow-Up Faculty Self-Assessment Cover Letter

Dear ____________:

I am writing to follow up with you regarding the enclosed survey. Since we did not initially have an adequate response rate from our adjunct faculty group, I need your help. If you have already responded, thank you! Your contribution to this study is most appreciated; just ignore this second request.

If you did not respond initially, I truly need your help in achieving a rate of response that will be meaningful and effective in directing the workforce training efforts for Fox Valley Technical College. Please take 10 minutes to complete this brief self-assessment tool regarding your skills as a trainer in business and industry contract services. I assure you, again, that your response is completely confidential. Please return the survey in the enclosed postage-paid envelope **by (date)**.

Thank you for your work with the college and the employers we serve through your outstanding efforts.

Best regards,

Susan A. May
Vice President, Instructional Services

Enclosures

Open Ended Question: Strongest Competencies Identified

Regular Faculty Responses	Adjunct Faculty Responses	Employer Responses
Adaptability to change/versatility (11)	Adaptability to change/versatility (3)	Adaptability to change/versatility (5)
Years of industry experience (6)	Years of industry experience (7)	
Ability to relate to the employees as individuals-addressing their needs, and making them feel comfortable and important (9)	Ability to reach all types of students at their level--addressing their needs and making material understandable (10)	Ability to reach all types of students at their level and make material understandable (11)
Ability to develop relationships and rapport with customers (5)	Ability to develop relationships and rapport with customers	
Experience (2)		Experience
Ability to instill a sense of confidence in employers	Organizational culture assessment skill	
Ability to assess needs (6)		Ability to assess needs (6)
Workplace understanding (3)	Workplace understanding (2)	Workplace understanding (7)
Presentation skill (7)	Presentation skill (2)	Presentation skill (3)
Teaching skills	Teaching skills	
Knowledge of the subject matter (14)	Knowledge of the subject matter (10)	Knowledge of the subject matter (24)
Organizational skills (3)		
Listening skills (3)		
Ability to simplify the complex and deliver practical instruction (3)	Ability to simplify the complex and deliver practical instruction (2)	Ability to simplify the complex and deliver practical instruction
Questioning skill		
Ability to tailor/customize instruction to the needs of the customer (6)	Developing course objectives	Ability to tailor/customize instruction to the needs of the customer (3)
Project management skill		Customer service focus/attitude (2)
Sense of humor	Understanding adult learning concepts	
Willingness to learn	Willingness to learn from students	
Self-knowledge	Enthusiasm and patience	Enthusiasm (2)
Group dynamics skills	Group dynamics skills	Group dynamics skills (4)
Analysis and evaluation skills	Coaching and feedback skill (2)	

Open Ended Question: Strongest Competencies Identified continued...

Regular Faculty Responses	Adjunct Faculty Responses	Employer Responses
Writing instructional material	Instructional design	
Understanding individual learning styles	Understanding training theories and techniques	Understanding training theories and techniques (2)

Open Ended Question: Competencies Needing the Most Improvement

Regular Faculty Responses	Adjunct Faculty Responses	Employer Responses
Ability to stay current with trends and technology in the industry (3)	Ability to stay current with trends and technology in the industry (5)	
Using instructional technology (14)	Using instructional technology (12)	Using instructional technology (2)
Identifying skills needed by employees (5)	Identifying skills needed by employees (3)	Identifying skills needed by employees (2)
Establishing relationships and networks with employers (2)		
Questioning skill (3)		
Ability to pace oneself throughout the year		Closure/summarization skills
Time management skills (3)		Availability/responsiveness (3)
Model building skill	Model building skill	
Ability to address the breadth of learning abilities that exist in industry		
Project management (2)		Project management
Designing instruction for adults in the workplace	Designing instruction for adults in the workplace	Designing instruction for adults in the workplace (3)
Delivery and presentation skills (3)	Delivery and presentation skills (4)	Delivery and presentation skills
Instructional design (2)	Instructional design (2)	Instructional materials development (2)

Open Ended Question: Competencies Needing the Most Improvement continued...

Regular Faculty Responses	Adjunct Faculty Responses	Employer Responses
Organizational/managerial skills		Organization skills (3)
Knowledge of training techniques and theories (4)	Knowledge of training techniques and theories (4)	
Group process skill (4)	Group process skill (3)	Group process/involvement
Understanding adult learning theories		
Curriculum development (2)	Curriculum development	Prepared and on time for training
Accelerated learning techniques		
Organizational culture assessment skill (4)	Organizational culture assessment skill	Organizational culture assessment skill
Information search skill (3)		Information search skill
Understanding learning styles of participants		Actual experience in industry
Writing skill	Writing skill	
Personal assertiveness skills	Objectives preparation skill	Assertiveness
		Breadth and depth of subject matter understanding (3)
	Evaluation techniques	Customer service attitude

Appendix P

Follow-Up Employer/Client Evaluation Cover Letter

Dear ______________:

I am writing to follow up with you regarding the enclosed survey. Since we did not initially have an adequate response rate from our business clients, I need your help. If you have already responded, thank you! Your contribution to this study is most appreciated; just ignore this second request.

If you did not respond initially, I truly need your help in achieving a rate of response that will be meaningful and effective in directing the workforce training efforts for Fox Valley Technical College. Please take a few minutes of your time to complete this brief evaluation of our faculty trainers' overall skills in providing services to your organization within the last eight months or so. The study is intended to get overall feedback regarding our work with you, not necessarily about a specific faculty member or specific training event. I assure you, again, that your response will be kept completely confidential. Please return the survey in the enclosed postage-paid envelope **by (date)**.

Thank you for providing the feedback we need in our continuous improvement efforts. We hope to continue to be of service to you.

Best regards,

Susan A. May
Vice President, Instructional Services

Enclosures

Appendix Q

Formative Committee Recommendations for Faculty Development

The following recommendations were developed by the project's formative committee to address the performance gaps identified in the evaluation. These recommendations were focused on the professional development of FVTC faculty who deliver contracted workforce training. The "votes" column refers to the number of prioritization votes each recommendation received from the committee members, thus establishing an overall priority for these recommendations.

Votes	Recommendations to Address Performance Gaps	Related Competency
6	1. Develop a tool (e.g., questionnaire or checklist) for instructors to use in concert with a company when conducting a pre-training organizational assessment.	**Organizational Culture Assessment Skill:** Ability to assess an organization's political, economic, and social systems; using this larger perspective as a framework for influencing events and change
6	2. Utilize the expertise of FVTC's best facilitators to provide faculty with hands-on training in group process and questioning skill development, with facilitation tips and techniques posted to a web site on an on-going basis. Further on-going interaction and support would occur through the use of a listserve of interested instructors/trainers.	**Group Process Skill:** Influencing groups so that tasks, relationships, and individual needs are addressed **Questioning Skill:** Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods
4	3. Offer and promote workshop sessions, as well as provide individualized support, in building faculty skills in the use of instructional technology.	**Instructional Technology Application Skill:** Incorporating technology in instructional delivery and student learning applications (e.g. use of the Internet, e-mail, word processing, and presentation software)

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Votes	Recommendations to Address Performance Gaps	Related Competency
4	4. Create a self-paced training guide on "Preparing Clear Training Objectives" which includes checklists, examples and/or templates to aid faculty in clarifying what a company wants from training and developing corresponding objectives.	**Objectives Preparation Skill:** Preparing clear statements that describe desired training results
3	5. Sponsor a special seminar with a high level speaker on training theories and techniques, promoted to the college full-time and adjunct faculty as well as to business leaders and their internal trainers, to further advance the overall understanding of workforce training.	**Training Theories and Techniques Understanding:** Knowing the theories and methods used in training; understanding their appropriate uses
2	6. Build faculty skills in training theories and techniques through small groups, mentoring, and/or a training video, including concepts of adults as learners, assessment, facilitation, and accelerated learning.	**Training Theories and Techniques Understanding:** Knowing the theories and methods used in training; understanding their appropriate uses
2	7. Bring in an expert speaker on organizational culture assessment as a sectional for FVTC instructors/trainers and staff who work with business and industry as part of a college-wide inservice program.	**Organizational Culture Assessment Skill:** Ability to assess an organization's political, economic, and social systems; using this larger perspective as a framework for influencing events and change
2	8. Create a resource list of "expert" trainers who could be called upon by others with questions or problems related to adaptability/versatility in conducting workforce training.	**Adaptability/Versatility:** Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations
1	9. Develop a training video demonstrating questioning and group process skills being modeled by an expert trainer, made available for checkout by all faculty.	**Group Process Skill:** Influencing groups so that tasks, relationships, and individual needs are addressed **Questioning Skill:** Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods

Votes	Recommendations to Address Performance Gaps	Related Competency
0	10. Ensure that part of the standard participant training evaluation involve how subsequent sessions could be altered, redesigned, or re-focused for improvement. Follow-up by the instructor/trainer needs to occur to make the learning experience more meaningful to participants.	**Adaptability/Versatility:** Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations
0	11. Develop and offer concentrated seminars which address the key gap areas from this study for Wisconsin Technical College System instructor/trainers at 4-5 regional sites throughout the state, cycling offerings on an annual basis.	**Combination of Seven Competency Gap Areas**
0	12. Once an instructor/trainer discusses needs with the client and begins training, have the student participants identify their course expectations for comparison with the training objectives prepared by the trainer. Adjust the training objectives so that needs are met and success can be achieved.	**Objectives Preparation Skill:** Preparing clear statements that describe desired training results **Adaptability/Versatility:** Ability to change, adjust, alter, redirect, or modify teaching and learning strategies in a variety of situations
0	13. The college's Training and Development Department should develop and maintain (at least quarterly and via the web site) a bibliography and some actual articles on training theories and techniques for access and use by instructors/trainers.	**Training Theories and Techniques Understanding:** Knowing the theories and methods used in training; understanding their appropriate uses
0	14. Make adjunct faculty aware of some of the success stories of the full-time faculty in a forum where these groups could interact and share specific questioning and other feedback techniques that have worked well in the training setting.	**Questioning Skill:** Gathering information from and stimulating insight in individuals and groups through the use of interviews, questionnaires, and other probing methods

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Appendix R

Detailed Recommendations for Faculty Development

The following represents the work done by the training and development coordinator and the researcher to further merge/eliminate overlap, develop detail, and address logistical considerations for the formative committee's proposed recommendations for faculty development which address the competency performance gaps identified in this study.

Recommendation #1

Develop a tool (e.g. questionnaire or checklist) for faculty and staff to use in concert with a company when conducting a pre-training organizational assessment.

Resources Needed:	Staff time; other tools already developed by the college for similar purposes; college support services (e.g., assessment, training and development)
Responsibility:	Dean, Community and Economic Development
Other Considerations:	Ensure that faculty and staff receive inservice training on the tool and how to effectively utilize it for organizational assessment.
Targeted Completion:	May, 1999

Recommendation #2

Utilize the expertise of FVTC's best facilitators to provide faculty with hands-on training in group process, questioning skills, training theories and techniques, and adaptability/versatility, with facilitation tips and techniques posted to a web site on an on-going basis. Further on-going interaction and support should be facilitated through the use of a listserve of interested instructors/trainers where experienced trainers can be called upon by others with questions and problems encountered in conducting workforce training.

Resources Needed:	Development time; existing facilitator training resources of the college; web support and listserve maintenance
Responsibility:	Coordinator, Training and Development

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Other Considerations: Develop process to gather and post tips and techniques to the web site on an on-going basis; inform adjunct and full-time faculty of the web site and listserve.

Targeted Completion: Hands-on training -- August, 1999
Web site/listserve -- October, 1998

Recommendation #3

Offer and promote workshop sessions, as well as provide individualized support, in building faculty skills in the appropriate uses of instructional technology in workforce training.

Resources Needed: Faculty Resource Center services; WTCS Faculty Development Grant for Instructional Technology; FVTC Technology Roundtable for promotion to faculty and staff; trainers/presenters to deliver sessions

Responsibility: Executive Dean, Instructional Support Services
Coordinator, Training and Development

Other Considerations: Continue summer institute format as one delivery option

Targeted Completion: Current and on-going area of emphasis

Recommendation #4

Create a self-paced training guide on "Preparing Clear Training Objectives" which includes checklists, examples and/or templates to aid faculty in clarifying what a company wants from training and developing corresponding objectives.

Resources Needed: Development time; existing training resources of the college

Responsibility: Executive Dean, Instructional Support Services
Staff Leads, Faculty Resource Center

Other Considerations: Utilize results of Recommendation #1; determine best format and means of disseminating this guide to faculty

Targeted Completion: December, 1998

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Recommendation #5

Sponsor a special seminar with a nationally-recognized speaker on training theories and techniques, promoted to the college full-time and adjunct faculty as well as to business leaders and their internal trainers, to further advance the overall understanding of workforce training.

Resources Needed: To be determined--potential resources from the college, seminar fees, and/or partner organizations

Responsibility: Dean, Community and Economic Development
Coordinator, Training and Development

Other Considerations: Consider co-sponsorship with the regional ASTD (American Society for Training and Development) organization

Targeted Completion: June, 1999

Recommendation #6

Bring in a speaker experienced in organizational culture assessment as a sectional for FVTC instructors/trainers and staff who work with business and industry as part of a college-wide inservice program.

Resources Needed: To be determined--speaker fees

Responsibility: Coordinator, Training and Development

Other Considerations: Consider other delivery venues and formats; consider doing in conjunction with Recommendation #1, tapping outside expertise in assessment tool development and possible presentation for faculty

Targeted Completion: August, 1999

Recommendation #7

Develop a training video demonstrating training theories and techniques, including questioning and group process skills being modeled by an experienced trainer, made widely available to all faculty.

Resources Needed: Support resources of Institutional Advancement (focus group research, video production); development time

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Responsibility: Coordinator, Training and Development
Dean, Community and Economic Development

Other Considerations: Ensure that this product does not duplicate an existing resource--research availability of other video(s) that would address this need as first step; conduct focus groups with faculty to further define most important areas of focus for the video; video production schedule availability; plan for dissemination

Targeted Completion: December, 1999

Recommendation #8

Ensure that part of the standard participant training evaluation involve how subsequent sessions could be altered, redesigned, or re-focused for improvement. Follow-up by the instructor/trainer needs to occur to make the learning experience more meaningful to participants.

Resources Needed: Standard training evaluation process

Responsibility: Individual instructors/trainers
Dean, Community and Economic Development (faculty inservice)

Other Considerations: Focus on the importance of this type of feedback through inservice sessions on the college's new evaluation tools and processes for contract training

Targeted Completion: Evaluation -- On-going
Inservice sessions -- October, 1998

Recommendation #9

Develop and offer concentrated seminars which address the key gap areas from this study for Wisconsin Technical College System instructors/trainers at 4-5 regional sites throughout the state, cycling offerings on an annual basis.

Resources Needed: Development time; statewide coordination; travel expenses; material reproduction; instructor/trainer time; WTCS and district commitment

Responsibility: To be determined

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Other Considerations:	Share FVTC models for faculty development and corresponding training products (from these recommendations) with other WTCS colleges; potential WTCS-coordinated/sponsored program utilizing resources of several districts; assess statewide interest and commitment up front
Targeted Completion:	To be determined

Recommendation #10

Once an instructor/trainer discusses needs with the client and begins training, have the student participants identify their course expectations for comparison with the training objectives prepared by the trainer. Adjust the training objectives so that needs are met and success can be achieved.

Resources Needed:	None
Responsibility:	Individual instructors/trainers Dean, Community and Economic Development (assessment tool)
Other Considerations:	Incorporate this assessment process into one of the final steps of the organizational assessment tool (Recommendation #1).
Targeted Completion:	May, 1999

Recommendation #11

The college's Training and Development Department should develop and maintain (at least quarterly and via the web site) a bibliography and some actual articles on training theories and techniques for access and use by instructors/trainers.

Resources Needed:	Support from the college's research librarian and Faculty Resource Center staff, including web support
Responsibility:	Coordinator, Training and Development
Other Considerations:	Develop a process for review and decision-making on best resources to post
Targeted Completion:	February, 1999

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Recommendation #12

Make adjunct faculty aware of some of the success stories of the full-time faculty in a forum where these groups could interact and share specific questioning and other feedback techniques that have worked well in the training setting.

Resources Needed:	Development time
Responsibility:	Coordinator, Training and Development
Other Considerations:	Deliver as part of on-going adjunct faculty inservice programs
Targeted Completion:	On-going

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Appendix S

Summative Committee Feedback on Recommendations for Faculty Development

The following summary represents the feedback received from the project's five member summative committee. The specific responses to the questions posed, as well as a summary of their suggestions for each item, were included.

Question 1: Do the recommendations for faculty development adequately address the instructor/trainer competency performance gaps identified in the evaluation study?

5 - Yes
0 - No

- Due to the heavy involvement of adjunct faculty in workforce training, steps need to be taken to include this group in the recommended action plans.
- Re-do the study again in five years to find out.
- Very timely--highly relevant to the needs of this community and this college. Appreciated the way a large amount of data was simplified into gap analysis summary. This study will be an excellent basis for on-going monitoring of this crucial area.
- Recommendations more than adequately address the gaps noted.
- This section might be more easily absorbed if the recommendations were grouped under two to four overarching rubrics, e.g. sources of assessment, sources of expertise, sources of specific ways to improve.

Question 2: Are the number of recommendations reasonable?

0 - Too few
1 - Too many
4 - About right

- The recommendations cover a lot of ground and represent an ambitious plan. However, the suggestions appear doable with proper project planning and coordination.
- It is manageable.
- There were three main gaps noted across all groups and four gaps noted across two groups (seven gap areas). I would recommend targeting the three main gaps. Twelve initiatives would be hard to administer to ensure participation. Faculty may no longer want to participate in contract training if faced with 12 more things to do--they would be viewed as overwhelming if the expectation was for them to participate in all.
- Recommendation #4 should have a more direct link to Recommendation #1--it is really an integral part of #1.

Question 3: Are all recommendations appropriate within the context of Fox Valley Technical College's workforce training initiatives?

4 - Yes
1 - No

- The recommendations address the seven major gaps that were identified. Again, strategies need to be developed to engage adjunct faculty on an on-going basis in training initiatives.
- Adjunct faculty may need more help than regular staff with instructional technology, etc.
- Very helpful in further improving an already strong capability of the college.
- I would have thought that preparing clear objectives (Recommendation #4) would be part of the course work for certification to teach in a technical college. Perhaps a review of those curricula would reveal a need for adjustment. Narrow the scope of recommendations to be district focused, rather than adding Recommendation #9 at this time. Perhaps dividing the list into "immediate initiatives" and "future initiatives" would be helpful. Recommendations #8 and #10 seem to come under the same heading of course evaluation. Having a standard evaluation tool and standard operating procedure for use of the tool should be considered.
- The actual wording of a couple of the recommendations results in a less than clear focus for the reader. Recommendation #1 is an example--what specifically is the "tool" supposed to accomplish? I believe the recommendations should be clearly stated so that a reader who does not have the benefit of the field can still appreciate what is being stated and the rationale for that particular recommendation.

Question 4: Can you support the overall prioritization of these recommendations in terms of importance and consideration for implementation?

5 - Yes
0 - No

- Recommendations #1 and #2, in particular, address concerns related to organizational assessment, group process, questioning skills, and training techniques. The development of the pre-training organizational assessment appears to be a key to successful workforce training. The hands-on training areas should include sufficient time for participants to practice. In addition, there might be a way for a novice faculty member to observe seasoned faculty conduct organizational assessment.
- Since more adjunct faculty are involved in contract training than regular staff, special consideration should be given to these instructors. Only one, Recommendation #12, speaks to adjunct faculty and it assumes that regular faculty have something to share with the adjunct faculty. It seems that all recommendations should be equally directed toward both groups.
- Should roll out these recommendations on a gradual basis to prevent an overload condition.
- It seems that the recommendations have been prioritized according to the three main gaps and instructional technology being the top four recommendations. After that, I begin to see a problem with too many recommendations.
- It is not clear in Appendix S that there is an inherent prioritization of these recommendations. Would it be appropriate to identify the key 3-5 recommendations that are judged to most impact future performance?

Appendix T

Final Recommendations for Faculty Development

The following represents the modifications made to the initial series of 12 recommendations suggested by the project's formative committee and further refined by the training and development coordinator and the researcher. The modifications were made based on the feedback received from the project's summative committee.

Core Recommendations to Address Performance Gaps -- Immediate Implementation 1998-99

Recommendation #1--Organizational Assessment and Preparation of Training Objectives

Develop an assessment template (e.g. questionnaire or checklist) for any faculty and staff involved in workforce training to use in concert with a company when conducting a pre-training organizational assessment. This document would serve to aid faculty and staff in clarifying what a company wants to achieve from training and to develop corresponding training objectives. Ensure that faculty and staff receive inservice training on the assessment template and how to effectively utilize it for organizational assessment.

Resources Needed:	Staff time; other instruments already developed by the college for similar purposes; college support services, e.g. assessment, training and development
Responsibility:	Dean, Community and Economic Development Staff Leads, Faculty Resource Center
Other Considerations:	Contact other community/technical colleges to determine their approach and resources that might be useful in this development. Review faculty certification courses to determine extent of content emphasis on the development of training objectives.
Targeted Completion:	May, 1999

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Recommendation #2--Group Process, Questioning Skills, Training Theories/Techniques, and Adaptability/Versatility

Utilize the expertise of FVTC's best facilitators to provide faculty (full-time and adjunct faculty) with hands-on training in group process, questioning skills, training theories and techniques, and adaptability/versatility, with facilitation tips and techniques posted to a web site on an on-going basis. Further on-going interaction and support should be facilitated through the use of a listserve of interested instructors/trainers where experienced trainers can be called upon by others with questions and problems encountered in conducting workforce training.

Resources Needed: Development time; existing facilitator training resources of the college; web support and listserve maintenance

Responsibility: Coordinator, Training and Development

Other Considerations: Develop a process to gather and post tips and techniques to the web site on an on-going basis; inform adjunct and full-time faculty of the web site and listserve.
Utilize FVTC's existing mentor program for new faculty to further address these competency areas.

Targeted Completion: Web site/listserve -- October, 1998
Hands-on training -- August, 1999
Faculty mentoring -- On-going

Recommendation #3--Instructional Technology

Offer, promote, and conduct a variety of workshop sessions, as well as provide individualized support, in building the skills of adjunct and full-time faculty in the appropriate uses of instructional technology in workforce training.

Resources Needed: Faculty Resource Center services; WTCS Faculty Development Grant in Technology; FVTC Technology Roundtable for promotion to faculty and staff; trainers/presenters to deliver sessions

Responsibility: Executive Dean, Instructional Support Services
Coordinator, Training and Development

Other Considerations: Continue summer institute format as one delivery option; consider regular adjunct faculty inservice program as another venue.

Targeted Completion: Current and on-going area of emphasis

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Recommendations for On-going Workforce Training Operations/Procedures

Recommendation #4--Participant Evaluation Process

Ensure that part of the standard participant training evaluation involve how subsequent sessions could be altered, redesigned, or re-focused for improvement. Follow-up by the instructor/trainer needs to occur to make the learning experience more meaningful to participants.

Resources Needed:	Standard training evaluation process
Responsibility:	Individual instructors/trainers Dean, Community and Economic Development (faculty inservice)
Other Considerations:	Focus on the importance of this type of feedback through inservice sessions on the college's new evaluation instruments and processes for contract training.
Targeted Completion:	Evaluation -- On-going Inservice sessions -- October, 1998

Recommendation #5--Participant Expectations and Training Objectives

Once an instructor/trainer discusses needs with the client and begins training, have the student participants identify their course expectations for comparison with the training objectives prepared by the trainer. Adjust the training objectives so that needs are met and success can be achieved.

Resources Needed:	None
Responsibility:	Individual instructors/trainers Dean, Community and Economic Development (assessment template)
Other Considerations:	Incorporate this assessment process into one of the final steps of the organizational assessment template (Recommendation #1).
Targeted Completion:	May, 1999

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Recommendation #6--Instructor Resources

The college's Training and Development Department should develop and maintain (at least quarterly and via the web site) a bibliography and some actual articles on training theories and techniques for access and use by all instructors/trainers.

Resources Needed:	Support from the college's research librarian and Faculty Resource Center staff, including web support
Responsibility:	Coordinator, Training and Development
Other Considerations:	Develop a process for review and decision-making on best resources to post.
Targeted Completion:	Initially February, 1999; then on-going

Other Recommendations for Future Consideration

Recommendation #7

Sponsor a special seminar with a nationally-recognized speaker on training theories and techniques, promoted to the college full-time and adjunct faculty as well as to business leaders and their internal trainers, to further advance the overall understanding of workforce training.

Recommendation #8

Bring in a speaker experienced in organizational culture assessment as a sectional for FVTC instructors/trainers and staff who work with business and industry as part of a college-wide inservice program.

Recommendation #9

Develop a training video demonstrating training theories and techniques, including questioning and group process skills being modeled by an experienced trainer, made widely available to all faculty.

Recommendation #10

Develop and offer concentrated seminars which address the key gap areas from this study for Wisconsin Technical College System instructors/trainers at 4-5 regional sites throughout the state, cycling offerings on an annual basis.

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Biographical Sketch of Student

SUSAN A. MAY

Susan A. May holds a Bachelor of Science degree in Home Economics Education (1978) and a Master of Science degree in Vocational Education Administration (1991) from the University of Wisconsin-Stout, Menomonie, Wisconsin. She is certified as an instructional administrator in the Wisconsin Technical College System. Susan also completed the Covey organization's Principle-Centered Leadership Program in 1993. She has served as a leadership mentor to two Fox Valley Technical College staff participants of the Wisconsin Leadership Development Institute within the last three years.

Ms. May is currently the Vice President of Instructional Services at Fox Valley Technical College. As chief academic officer for the institution, she has responsibility for administering and providing overall direction to the functions of instructional programming and delivery, curriculum development, distance education/alternative delivery, instructional support services, international studies, economic development contract training for business and industry, and all regional center/campus operations including a number of satellite training facilities. She has held several managerial and administrative positions with Fox Valley Technical College since joining the organization in 1983. Prior to that she had five years of experience as a high school instructor in home and consumer sciences, served as department chair and student club advisor, and taught adult and post-secondary level courses as an adjunct faculty member for two Wisconsin Technical College System (WTCS) districts.

Ms. May has presented a number of conference sessions or workshops at the local, state, national, and international levels on topics including institutional marketing, monitoring of institutional effectiveness, developing strategic partnerships, contract services to business and industry, adult education principles and techniques, and conducting community needs assessment.

Ms. May serves as a member of the Waupaca County Economic Development Corporation Board, the Fox Cities Chamber of Commerce Alliance for Education Steering Committee, and the Wisconsin Technical College System Instructional Services Administrators Association. She served as secretary, vice-chair, and chair of the WTCS Adult Continuing Education/Economic Development Committee in recent years. She is also a member of a number of professional organizations, including the Wisconsin Vocational Association, the American Vocational Association, the National Council for Occupational Education, and the Wisconsin Economic Development Association.